Cultural Competence Series

Developing Cultural Competence in Asian-American and Pacific Islander Communities: Opportunities in Primary Health Care and Substance Abuse Prevention

CSAP Center for Substance Abuse Prevention
Substance Abuse and Mental Health Services Administration

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration
Center for Substance Abuse Prevention

OMH OFFICE OF MINORITY HEALTH

HRSA Health Resources & Services Administration
Bureau of Primary Health Care

5

Special Collaborative Edition

CSAP Cultural Competence Series 5
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Developing Cultural Competence in Asian-American and Pacific Islander Communities: Opportunities in Primary Health Care and Substance Abuse Prevention

Bureau of Primary Health Care, Health Resources and Services Administration
Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration
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Foreword

Volume 5 of this special collaborative Cultural Competence Series, *Developing Cultural Competence in Asian-American and Pacific Islander Communities: Opportunities in Primary Health Care and Substance Abuse Prevention,* represents the intent of the Center for Substance Abuse Prevention, the Bureau of Primary Health Care, and the Office of Minority Health to continue exploring culture-specific factors that influence the performance of prevention programs and primary health care practices with unique ethnic/racial communities. This time we examine some cultural issues of Asian-American and Pacific Islander communities and the relationship of specific cultural factors to the design and evaluation of substance abuse prevention programs. This volume focuses on the challenging distinctions and commonalities that are shared by these highly diverse ethnic/racial communities within the context of community resilience and how resilience can be brought to bear in the design, implementation, and evaluation of prevention approaches. The authors of this volume expound upon their perspectives related to community cultural characteristics within the overarching framework of good science. These diverse but unifying perspectives serve as a context for developing a deeper understanding of the role of culture in the prevention of alcohol and drug problems in Asian-American and Pacific Islander communities.

The authors challenge program planners and evaluators to continue to explore the potent role that culture plays in the promotion and maintenance of sound health among these diverse populations and present guiding principles for the design, implementation, and evaluation of culturally responsive substance abuse prevention programs. In keeping with its mission to disseminate health services and prevention approaches that respond to the needs of diverse ethnic/racial communities and geographic locales, this collaborative Cultural Competence Series intends in future publications to build upon the regional and ethnic diversity among Asian-Americans and Pacific Islanders that has been so ably demonstrated in this volume.

Whenever possible, the following conventions are used throughout this monograph concerning ethnic categorizations: Asian-Americans and Pacific Islanders include United States citizens of Asian descent and the diversity of Pacific Islanders residing in the

United States and the six jurisdictions (including freely associated sovereign nations of Federated States of Micronesia [FSM], Republic of the Marshall Islands [RMI], and Republic of Palau [Palau]) and U.S. flag territories (American Samoa, Commonwealth of the Northern Mariana Islands [CNMI], and Guam). The use of the term "Asian" refers to persons from the Asian continent who are foreign born and not citizens of the United States. The indigenous people of the Hawaiian Islands are called Native Hawaiians.

The Cultural Competence Series has as its primary goal the scientific advancement of evaluation and practice methodology designed specifically for health services, primary health care, and substance abuse prevention approaches within the multicultural context of community settings. Our country has a rich and diverse ethnic heritage. The series is dedicated to exploring and understanding this heritage and its critically important role in the development of health services and substance abuse prevention programs that are accessible to all Americans, regardless of their language or cultural background.

The Cultural Competence Series provides the public health and substance abuse prevention fields with a unique opportunity to formulate effective strategies that can be used by professionals working in widely diverse settings. This unprecedented series has established a framework for the transfer of innovative, cutting-edge technology in this area and a forum for the exchange of knowledge among program developers, implementers, and evaluators. It is the sincere hope of those who have contributed to this series that it will stimulate new ideas and further prevention efforts among all Americans.

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Contents

Yee (chapter 1) outlines essential challenges and opportunities in health promotion and disease prevention for Asian-American and Pacific Islander (AAPI) communities. The author questions national portrayals of AAPIs as a model healthy minority, since this population suffers from a major cancer crisis. There are many opportunities for primary health care practitioners to make significant contributions to the health of AAPI populations. In order for primary health providers to address these challenges and develop culturally competent notions of disease prevention and health promotion for AAPI populations, five initiatives must be undertaken. First, there must be adequate partnerships with AAPI communities. Second, medical-healing practices must be culturally competent with AAPI communities. Third, a holistic health approach must be undertaken. Fourth, evaluation and delivery of services must be comprehensive and integrated with appropriate multidimensional approaches. Fifth, significant improvements must be made in prevention research methodology and instrumentation for AAPI populations. Critical recommendations are provided about research, evaluation, and service delivery.

Kim, Epstein, and Orlandi (chapter 2) suggest a framework for evaluating substance abuse prevention, general health promotion, and primary health care interventions for Asian-American and Pacific Islander populations. The extreme variability of cultures, substance use behaviors, and lifestyle factors demand careful attention to the wide diversity among Asian-American and Pacific Islander groups. Specific etiological, social, and contextual factors across each Asian-American and Pacific Islander population must be considered in crafting substance abuse prevention and any other health intervention, including the design and conduct of ensuing evaluations.

Zane, Park, and Aoki (chapter 3) outline notable features in the development of culturally valid measures for assessing the impact of prevention in Asian communities. They argue that culturally valid measures can accurately determine whether interventions have effectively prevented substance abuse among specific Asian-American and Pacific Islander populations. Without culturally valid evaluation measures, health professionals can-

not determine the efficacy of their programs. The authors describe the process of developing culturally valid measures to assess inter-Asian variation and using them in substance abuse program evaluation. Their arguments are thought provoking and generalizable across health disciplines.

Yee (chapter 4) asserts that in order to effectively evaluate the impact of substance abuse prevention, lifespan developmental issues must be considered. Specifically, careful attention to age and gender roles of Asian-Americans and Pacific Islanders must be incorporated in substance abuse prevention and evaluation. Critical socialization, historical, and contextual factors impinge upon AAPIs, and the consequences of these factors systematically vary according to the age and gender of individuals.

Sasao (chapter 5) argues for a comprehensive framework that includes the complex and multiple factors involved in substance use among Asian-American and Pacific Islander adolescents. Sasao found that substance use among Chinese and Vietnamese high school students was a function of demographic, psychosocial, interpersonal, and contextual factors. Individual risk factors, such as gender and academic achievement, and contextual risk factors, such as interethnic climate and school setting, contributed to substance use among Asian-American adolescents.

Austin (chapter 6) describes current evidence on substance use among Asian-American youth. He explains conflicting evidence by comparing the specific studies that have examined this issue. He describes the state of the art in this field and identifies critical gaps in evaluation of substance abuse prevention.

Mokuau (chapter 7) cogently argues that the historical and cultural context of Pacific Islanders has critical implications for substance abuse and other health service programs and their evaluation. Despite the great diversity among Pacific Islander populations, many of these groups share sad realities. As in many ethnic/racial communities, there are those who have flourished and met life's challenges, and there are many others who abuse substances in order to cope with the loss of homelands, devaluation of their native culture, and racial discrimination. The staggeringly high use of substances by Pacific Islanders has negatively affected their health status.

Ogawa (chapter 8) describes critical Hawaiian values and beliefs that must be considered in developing and evaluating substance abuse and other health services for this population. Integration of these important values can support prevention efforts and ensure meaningful evaluation of programs for substance abuse prevention and other health issues. The Hawaiian phrase *e hana pono* means to achieve group harmony, support, and well-being; to work for justice in dispelling the ghost of inferiority; and to strive for righteousness in relation to the Hawaiian homeland and cultural strengths.

In the epilog, Yee and Mokuau outline three important themes significant to developing culturally competent evaluation for Asian-American and Pacific Islander communities. The first theme is a recognition of the wide diversity among the ethnic groups included within Asian-American and Pacific Islander populations. The second theme is the incorporation of essential cultural values, attitudes, and behaviors in a holistic manner in order to use cultural strengths to encourage resilience as a weapon against substance abuse and as a tool for promoting healthy behaviors. The last theme, which is woven throughout this volume, is that substance abuse prevention, primary health care, and other health service strategies must respond to the culture they are designed to serve. Yee and Mokuau conclude by providing key recommendations for evaluating substance abuse prevention and health services programs for Asian-American and Pacific Islander communities.

Crafting culturally competent evaluation of programs for substance abuse prevention and health services is a necessity and can provide cost-effective outcomes in this era of managed care. The provision of culturally appropriate health care to Asian-Americans and Pacific Islanders is potentially cost-effective because if done properly, it can improve health outcomes, increase quality of life, enhance lifelong productivity, and reduce mortality and morbidity resulting from substance abuse and related diseases.

Barbara W.K. Yee, Ph.D.

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Strategic Opportunities and Challenges for Primary Health Care: Developing Cultural Competence for Asian-American and Pacific Islander Communities

Barbara W.K. Yee, Ph.D.

Introduction

In *Healthy People 2000 Review, 1995–6* and *1997* (National Center for Health Statistics [NCHS] 1996, 1997), the U.S. Department of Health and Human Services (DHHS) outlined health promotion and disease prevention objectives for this Nation. In order to address significant health disparities among racial and ethnic minority groups versus non-Hispanic White populations, DHHS gives special attention to tracking health conditions among populations at high risk for health problems (DHHS 1991b, 1995, 1997). Despite national efforts, disparities in the health status of certain minority groups remain, and in some cases have worsened. These disparities suggest that a systematic and more focused effort is needed to train minority health care professionals and health researchers to work in minority communities. The health needs of Asian-Americans and Pacific Islanders (AAPIs) have largely been ignored.

As health care moves toward managed care and health maintenance organizations (HMOs), the jury is out regarding how this move will affect health status in minority communities. An article appearing in the *Journal of the American Medical Association* (Bayliss, Rogers, Kosinski, & Tarlov, 1996) suggested that elderly patients treated at HMOs were more likely (54 percent) to suffer from congestive heart failure, high blood pressure, non-insulin-dependent diabetes, recent acute myocardial infarction, or depression than were those treated under fee-for-service arrangements (28 percent). These trends were especially noted among the poor elderly. The findings suggest poorer health outcomes among individuals living in poverty and among those who have multiple, chronic conditions. Without systematic health research in minority communities, we will not know the full impact of our health policies. Welfare reform has and will likely continue to exact heavier tolls on elderly and other immigrants from the Asian-American, Pacific Islander, and Hispanic communities who have significant language barriers and lack access to appropriate health services.

The challenge in the 21st century is to deal with the health care needs of the chronically ill (Institute for Health and Aging, 1996). In a managed care environment, health consumers must be willing and able to advocate for health services and to manage their own care (Suh & Penserga, 1996). This is a great challenge for non-English-speaking immigrants and for the frail, chronically ill, and elderly Asian-American and Pacific Islander populations because to them our health care environment is foreign and rapidly changing. Thirty-six percent of AAPIs under 65 years of age have no health insurance, compared with 16 percent of the general U.S. population (DHHS, 1994). Even when insured, AAPIs have less access to services because of language and cultural barriers (Association of Asian Pacific Community Health Organizations, 1996).

Poorer health among ethnic minorities occurs over a lifetime; conditions are multiple and synergistic—they often become chronic and are exacerbated by the stress of poverty, discrimination, and poor access to basic health care (Bureau of Primary Health Care, 1996; Heckler, 1985; NCHS, 1996; Office of Minor-

ity Health, 1995). Multidisciplinary research and service delivery efforts must forge effective partnerships among Federal, State, local, public, and private organizations, and must bring formal and informal resources to bear in order to address the health and mental disparities between White and ethnic minority communities.[1]

AAPI Health Status: Model Minority?

National portrayals of the health status of AAPIs suggest a model minority population—healthier even than Whites in the United States. However, national epidemiological data are seriously flawed, and valid empirical evidence to support or refute this portrayal is scarce. Researchers often point to the small size of the AAPI population to justify the lack of irrefutable data, noting that the data available do suggest that AAPIs are healthier than Whites. The poor empirical database and perpetuation of a model minority myth is problematic from several perspectives.

According to LaViest (1995) the elder population (50 and older) of Asian-Americans and Pacific Islanders is not adequately represented in health-related data because of the small size of the AAPI population and limitations or disagreements about appropriate rare sampling techniques. LaViest's (1995) analysis of Federal agencies found that only 23 of 44 national data sets included AAPI respondents, only 1 of these was large enough to estimate a .005 prevalence, and only 10 were large enough to estimate a .1 prevalence. This problem of inadequate representation is probably similar for other age groups in the AAPI population. When scanty data are aggregated across diverse populations such as Japanese, Hmong, or Native Hawaiians, the resulting estimates are poor at best, or wrong at the very worst. As a direct result of this poor national AAPI data, Federal policy directs only 11 of the 336 *Healthy People 2000* goals toward Asian-Americans (with none focusing on Pacific Islanders) and thus sustains the myth of their good health.

Evidence of significant underestimation of AAPI mortality abounds. Census undercounts and inaccurate reporting of race on death certificates (Hoyert & Kung, 1997) are largely to blame. For

instance, Hahn, Mulinare, and Teutsch (1992) found that the National Linked Birth and Death Files miscoded 33.3 percent of Chinese-American infant deaths, 48.8 percent of Japanese-American infant deaths, and 78.7 percent of Filipino-American infant deaths, typically as White infant deaths. In contrast, the errors for White infants were only 1.2 percent.

Hahn and Eberhardt (1995) explored the impact of such errors on the accuracy of life-expectancy predictions. They adjusted life expectancies at different ages by race/ethnicity and gender. They adjusted for census undercounts in the 1990 census, and they corrected for misclassification on death certificates by using the next-of-kin race/ethnicity designation. The authors then found that life-expectancy estimates decreased for both Asian-Americans and Pacific Islanders, as well as for Native Americans and increased for African Americans and Whites. The corrected life expectancies paint a less rosy picture of the health status of AAPIs.

The aggregation of data in national databases presents another research problem. AAPI ethnicities vary heterogeneously in health status, health risk, and protective factors. AAPI aggregated data are often contradicted by state surveys that include AAPI ethnic designations. For example, *Racial/Ethnic Patterns of Cancer in the United States, 1988–1992* (Miller et al., 1996) reports that Asian-American and Pacific Islander women cover the spectrum for site-specific cancer risk—for example, the lowest incidence of breast cancer is found among Korean-American women, while the second highest incidence is found among Native Hawaiian women; the highest incidence of cervical cancer is found among Vietnamese-American women, while the lowest incidence of this type of cancer is found among Japanese-American women.

Regardless of the diversity in incidence, cancer is still the number 1 killer of Asian-American and Pacific Islander women, while heart disease is the number 1 killer for all other ethnic groups (and a serious life-threatening disease for Asian-Americans and Pacific Islanders of both genders) (Chen & Koh, 1997; Yee, 1997a). Chen and Koh (1997) highlight that cancer rates are higher among AAPIs than among Whites: Vietnamese, Korean, Filipino, and Native Hawaiian women have higher rates of cervical uterine cancers than do White women; Japanese men and women have

higher rates of colon and rectal cancers than do Whites; Native Hawaiian and Japanese men have higher rates of esophageal cancers than do White men; Vietnamese women have higher rates of leukemia than do White women; Vietnamese, Korean, Chinese, Filipino, and Japanese men and women have higher rates of liver and intrahepatic bile duct cancers than do White men and women; Native Hawaiian men and women have higher rates of mortality from lung cancer than do Whites; Chinese, Vietnamese, and Filipino men have higher rates of nasopharyngeal cancer than do White men; Chinese women have higher rates of nasopharyngeal cancer than do White women; Native Hawaiian males have a greater incidence of pancreatic cancer than do White males; Native Hawaiian, Korean, and Japanese women have higher rates of pancreatic cancer than do their White counterparts; Korean, Japanese, Vietnamese, Native Hawaiian, and Chinese men have higher rates of stomach cancer than do White men; Vietnamese, Korean, Japanese, Native Hawaiian, and Chinese women have higher rates of stomach cancers than do White women; Filipino men have higher incidences of thyroid cancer than do White men; Filipino, Vietnamese, and Korean women have higher rates of thyroid cancer than do White women.

This cancer crisis among AAPI populations must be addressed. There are clear disease prevention and health promotion efforts that can significantly lessen cancer risks for Asian-Americans and Pacific Islanders: changes in behavior and lifestyle practices, such as giving up smoking; increases in preventive screening, such as having PAP smears; changes in diet, such as eating less smoked, grilled, fermented, or pickled foods; acculturation to healthy Western lifestyle habits and rejection of poorer ones. The need to target risk factors for preventable cancers among AAPI populations is urgent. These factors translate into higher cancer rates, higher stress, poorer outcomes, and higher mortality rates. Acculturation does not automatically lead to poorer health; however, acculturation and its accompanying stressors may increase the use of alcohol, tobacco, or illegal substances as coping strategies to alleviate stress or may put AAPIs at higher risk for developing diseases. The mediating and moderating role of stress in health promotion and disease prevention must be more closely exam-

ined. Acculturation to an American lifestyle may also mean higher intake of fat, sugar, and red meat; lower consumption of fish and soy products; and significantly lower levels of physical activity. Food, lifestyle habits, and the social and spiritual dimensions of life are key factors in recovery from illness and maintenance of health for traditional Asians and for many Pacific Islander cultures. Culturally competent health care for these populations must incorporate these factors.

Population-based statistics undercount Asian-Americans and Pacific Islanders and do not reflect the rapid growth in AAPI ethnicities between the 1970, 1980, and 1990 census. Given the problems with these data, they cannot be used to generate health policy for Asian-American and Pacific Islander populations because they underestimate the negative health realities among certain groups or at best provide poor estimates of AAPI health status. The Office of Management and Budget (OMB) has set a new Federal standard for data collection, which separates Asians from Native Hawaiians and Pacific Islanders. This separation is justified because Asian and Pacific Islander ethnicities differ in significant ways. This new standard will be used in the year 2000 census. It will significantly improve the collection of health data and will provide needed information to generate more accurate national health policies for AAPI populations.

Despite problematic national statistics, Hoyert and Kung (1997) found data on the poorest and best health among Pacific Islanders in mortality statistics for AAPI subgroups living in seven States, with age-adjusted death rates for both genders. For instance, mortality among Samoans (907.7 per 100,000) and Native Hawaiians (901.4) was highest in comparison with Whites (527.4), African Americans (816.8), and Native Americans (295.5). Asian Indians (275.2), Koreans (292.3), Japanese (298.8), Chinese (304.0), Filipinos (329.4), Vietnamese (415.9), and Guamanians (444.3) were somewhere in the middle, as compared with "Other" AAPIs (714.7) versus aggregated data among all AAPIs (350.5). These data strongly suggest large differences across specific AAPI groups. *Healthy People 2000* goals should target Samoans and Native Hawaiians, those in the "Other" AAPI category, and Southeast Asian immigrants such as Vietnamese, Hmong, and Cambodians.

These examples suggest a significant underestimation of AAPI mortality, incidence or prevalence of acute and chronic diseases, and the debilitating consequences of these diseases across ethnic-specific AAPI populations. The strategic opportunity for culturally competent health care professionals is to help dispel the model minority myth and improve the health status of AAPI populations. In addition, health providers can enlighten the science of health promotion and disease prevention by promoting the strategies used by the healthiest AAPI populations.

Primary Health Care: Seize the Opportunity

The Chinese character for crisis means both danger and opportunity—two possible outcomes from the same life event and stressors. Adversity can be an insurmountable barrier or a worthy challenge in spite of the odds. This Chinese philosophy or worldview should be the context within which our society views the impending changes from shifts in the U.S. health care system. We can acquiesce to the dangers of the shift to managed care or we can take the opportunity to improve the health status of those who are least likely to access primary health care because of sociocultural issues such as poverty, cultural or language barriers, remote location, or disability.

As gatekeepers of today's health care environment, primary care professionals typically are responsible for detecting health problems, providing treatment, maintaining patients, and promoting healthy lifestyles. There is growing recognition of the importance of the role of primary care practitioners in primary and secondary levels of substance abuse prevention, rather than exclusively in tertiary prevention, in which they deal with issues such as trauma and cirrhosis. Traditional medicine focused on the biological and physiological components of health, while modern medicine embraces the "biopsychosocial" approach, in which multiple factors—and their resulting health outcomes—can impinge upon the quality of life. DHHS's Women's Health Initiative incorporates critical psychosocial measures to examine the health consequences of the social environment; individual

differences in depression, optimism, or hostility; and quality of life and behaviors affected by disease or intervention (Matthews et al., 1997). In order to deliver the most effective health promotion and disease prevention to Asian-Americans and Pacific Islanders, primary care practitioners must incorporate the tools and methods of the behavioral and social scientist and must include cultural advisors as part of the health care team. It would probably be most cost-efficient to train our health care professionals in cultural competency and to sharpen their skills in the methodologies of the behavioral and social sciences.

The health status of Asian-American and Pacific Islander populations, as represented in *Healthy People 2000 Review 1997* (NCHS, 1997), could be significantly improved with access to primary health care and clinical preventive services. This access is available to other ethnic minority populations, the poor, and those with chronic health conditions. AAPIs are adequately represented in general biomedical research and health professions; however, they are underrepresented in the primary health care professions and poorly represented among those conducting AAPI-targeted biomedical, behavioral, or social sciences health research.

With these philosophical shifts comes the notion that multiple risk factors, multiple patterns of effective care, and a variety of treatment modalities in health care should become the norm rather than the exception. This may be especially critical for health conditions with significant behavioral components that lead to higher risk lifestyles among ethnic minorities and the poor. Moreover, the same objective level of risk exposure, such as intake of fat or exposure to carcinogens, may lead to greater negative health outcomes when the risk factors combine with differential access to health care or a genetic trait that may be found in certain ethnic populations. Inherent in this view is that a singular treatment modality would probably not work for all people; rather, multiple types of interventions, modalities, and treatments should be available to account for the diversity of people in this world. Finding one magic bullet appears to be out of touch with empirical data on health conditions (and their outcomes) that have a significant lifestyle and behavioral component, and with findings from large evaluation studies that examine the efficacy of singu-

lar therapeutic interventions. Many of the complex physical and mental health conditions cannot be resolved with one magic bullet but may require multiple treatment options. The most effective solutions are complex and multidimensional, and they address root problems rather than merely the symptoms.

Our research, prevention, and treatment efforts should provide multiple paths of care to achieve positive health outcomes across diverse ethnic populations. A cutting-edge trend in the empirical literature (Forgey, Schinke, & Cole, 1997; Botvin & Scheier, 1997; Botvin, Schinke, Epstein, & Diaz, 1994) suggests that providing life skills training to parents and children from families at high risk for substance abuse or developing these children's athletic, artistic, or academic skills and talents provides protection against the cluster of risk factors for substance abuse, violence, juvenile delinquency, or teen pregnancy. According to the Consortium on the School-based Promotion of Social Competence (1996), protective factors such as individual resilience, supportive family environment, and environmental supports that foster positive coping and reward social competence help counteract risk factors. Although these general interventions do not specifically target risky behaviors, they bolster protective factors and develop personal resources such as effective coping, adaptability, and general life skills. Protective factors appear to be very powerful tools for counteracting risk factors, and primary care professionals can help families enhance and increase protective factors for children.

Even the literature on substance abuse prevention suggests that the most effective prevention efforts should develop general coping and adaptational skills rather than target substance abuse simplistically, as in DARE, because such narrow interventions appear to have a relatively short-term impact. Preventive approaches to improving general adaptation and coping skills appear to have synergistic and spill-over effects across a broad spectrum of an individual's life. For instance, life skills programs (Botvin et al., 1994; Botvin & Scheier, 1997) teach a broach range of coping and adaptational skills that appear to bolster a child's ability to resist peer-induced temptations to abuse drugs or alcohol. These programs may also bolster academic achievement,

self-esteem, and the use of more positive adaptational skills to address life's problems and change life pathways to a more positive direction during critical periods of development.

Effective, culturally competent programs for disease prevention and health promotion incorporate a diversity of educational and extracurricular interventions for ethnic minority populations. A major difference between poor children and their rich counterparts is that poorer children do not have access to many activities outside school. These children are not exposed to a variety of activities that enable them to develop skills across broad arenas. For instance, music or art lessons or team sports such as golf or tennis are often prohibitive for parents who are strapped for cash or who do not have flexible job schedules that allow them to get their children to extracurricular practices or games. Publicly funded extracurricular activities available to poor urban children in cash-strapped cities and neighborhoods have decreased in the past two decades. Successful after-school programs offer poor children opportunities to sample a wide variety of activities so that they can expand their horizons, find their niche, hone life skills, and use their free time productively in a safe environment.

Cultural learning styles and adaptational strategies may differ across ethnic groups in the United States. These learning styles and strategies are shaped by the particular environmental milieu within which they originate and are maintained because they have some adaptive function (Yee, Huang, & Lew, in press). Therefore, motivational and teaching strategies with varied curricular content should support culturally and socially acceptable modalities of learning. Pediatricians and other primary health care professionals can assist AAPI families in this arena.

Primary health care professionals are in a pivotal position within the health care system to detect hidden substance abuse problems or other stigmatized health conditions that remain buried in Asian-American and Pacific Islander communities. Because certain health conditions and mental health problems have been widely stigmatized in AAPI communities, primary care professionals, rather than mental health care providers, may be in a better position to uncover these problems. Therefore, it is critical that primary care professionals have the cultural competence to de-

tect hidden or underlying health conditions that may be ameliorated in AAPI communities (Patel, 1996).

Barry and Fleming (1994) argued that family physicians commonly encounter alcohol-related disorders in their practices and are in an ideal position to observe the effects of that addiction on other family members and to develop a trusting and long-term relationship with the family. This relationship often allows the physician to broach sensitive issues and help patients change destructive behaviors. The role of the family physician in AAPI communities is crucial to detecting and facilitating improvements in health status. Pediatricians, internists, or family physicians may be the only health care professionals that Asian-Americans and Pacific Islanders see. Even mental health issues are more likely to be detected by physicians or to be presented as somatic problems rather than as mental distress (Sue, 1991; Sue, Nakamura, Chung, Yee-Bradbury, 1994). Thus, culturally competent primary health care providers are poised to make significant contributions to the overall health status of AAPIs as well as to health promotion and disease prevention efforts targeted to them.

Culturally Competent Notions of Disease Prevention and Health Promotion

Five national initiatives are necessary to promote culturally competent disease prevention and health promotion in Asian-American and Pacific Islander communities. Changes in the health care system have put primary care professionals in an ideal position to promote and be guided by research into culturally competent health interventions. These interventions should result in effective health policies for Asian-Americans and Pacific Islanders.

Adequate Partnerships With Minority Communities

The first step to enacting culturally competent health services for Asian-Americans and Pacific Islanders is to develop partnerships and link with their community-based organizations. Becoming

familiar with AAPI communities, giving access to them, and building a relationship of trust are key to developing culturally competent research and health interventions.

A tuberculosis (TB) prevention project for Vietnamese in Houston, Texas, is a case in point (Yee, 1996). This project was designed to provide Vietnamese residents with health education and screening for TB according to established treatment protocols. Noncompliance with these protocols was the biggest barrier to TB prevention and control among this population. The project recruited elderly Vietnamese living in six Vietnamese apartment complexes to become TB outreach workers and paraprofessionals. These elders were recruited because they knew the target population, were less likely to be employed, and were integral to the communities that were to receive the intervention. The outreach workers were trained in TB education and prevention by the county health department and State TB units. During a 3-month period, six workers provided 325 home visits, made 213 telephone calls, delivered medicine 82 times, conducted community education sessions, and educated 109 clients at home, provided transportation 121 times, scheduled appointments for 289 clients, and provided interpretation for 39 people. This project turned a completely noncompliant group into a population that was 97 percent compliant with treatment regimens. The project demonstrated that a partnership among community-based organizations, health researchers, and State and local providers can dramatically reduce tuberculosis rates among refugee populations.

Cultural Competence

This second essential ingredient for effective health interventions requires a close examination of the past, present, and future sociocultural context of the community, and its adaptive behaviors for dealing with life stressors. We must broaden our acceptance of possible solutions from third world and developing countries to help us shape our prevention efforts in the current climate of limited resources. The "barefoot doctor" programs in the People's Republic of China have helped immunize billions of Chinese people, even in rural areas. As part of these programs, health paraprofessionals

serve as health educators, nurses, and physician assistants. They are the first stop for health intervention, referring serious cases to physicians in acute care settings. The program has improved primary and secondary prevention in China.

The most basic aspect of cultural competence relates to the provision of services that are culturally sensitive and language appropriate. Lack of health care access is most commonly the result of language barriers (Association of Asian Pacific Community Health Organizations, 1996). For instance, in 1990, 65 percent of Asian-Americans and 12.9 percent of Pacific Islanders were foreign born. More than half (56 percent) of them reported that they did not speak English very well, and 34.4 percent reported being linguistically isolated (Lin-Fu, 1994).

Culturally competent primary health care, however, goes beyond mere medical interpretation (Jackson-Carrol, Graham, & Jackson, 1996). It requires a concerted effort to select, train, and support key outreach staff who can bridge the gap between ethnic communities and health institutions. In one such program, interpreters, cultural mediators, and community advisors were part of the health care team and addressed both clinical and public health aspects of care. The interpreters provided culturally competent case management and followup, and educated providers and medical students about the cultural issues surrounding their clients' care. Increased cross-cultural collaboration occurred across primary care and specialties. A Web site was developed to give providers instant access to cultural health information.

The Association of Asian Pacific Community Health Organizations (1996) made recommendations to managed care organizations for providing culturally competent health services to Asian-American and Pacific Islander communities. These guidelines help increase patient satisfaction and decrease unnecessary expenditures, while supporting preventive health practices in these communities. The guidelines suggest that key government agencies contract with AAPI community-based organizations to be national repositories for culturally appropriate assessment tools, family and medical history instruments, and other useful health service protocols. These community-based organizations can disseminate their culturally competent primary care delivery mod-

els. Universities can evaluate the key efficacy of primary care delivery models, assessment tools, and research methodologies that have demonstrated effectiveness for Asian-American and Pacific Islander populations.

Cultural competence must do more than overcome language barriers; it must address cultural and societal barriers to receiving and accessing health or mental health services. The perception that Asian-Americans and Pacific Islanders are healthier and have less mental distress than the general population is a significant barrier to their access to health and mental services. This perception has interfered with access to research funding, development of adequate policy, and provision of services to improve the health and mental health status of Asian-American and Pacific Islander populations. In the mental health arena, Sue, et al., (1994) argued that we must ensure the availability of culturally competent and responsive treatment or services that increase medical compliance with appropriate interventions, decrease the incidence of premature termination from therapy, and increase positive health outcomes. Their argument applies to the primary health care arena as well. Zane, Enomoto, and Chun (1994) found that mental health outcomes for Asian-American clients in treatment were poor. Not only were Asian-American clients less satisfied with their mental health services, but they showed iatrogenic effects from their therapeutic interactions, such as greater depression, hostility, and anxiety. What is noteworthy about this study is that standard mental health therapy given to Asian-American clients had detrimental outcomes. The authors attributed the worsening condition of Asian-American clients to a possible cultural mismatch between client and therapist, which resulted in interpersonal dynamics such as autonomy and dependence, expressions of emotions, or loss of face.

Culturally competent and responsive services must address the obvious barriers clients are dealing with, as well as more subtle ones, such as communication or behavioral patterns and culturally defined notions of illness, symptomatology, and acceptable treatment modalities. Ethnic-specific services can improve mental health outcomes for Asian-American clients, yet Asian refugees have special issues related to their refugee status and the

traumas they have experienced in their home country or in their journey to the United States (Zane, Hatanaka, Park, & Akutsu, 1994).

Another aspect of cultural competence is our understanding of the important cultural factors in explanatory models of illness, presentation of symptomatology, perception of risk, and patterns of seeking help. Johnson, Hardt, and Kleinman (1995) found that outcomes in a therapeutic setting depended on a provider's understanding of a patient's explanatory model of symptoms. This understanding will also enlighten our health research in minority communities.

In a classic review, Landrine and Klonoff (1992) argued that anthropological, sociological, and psychological theories and methodologies must be integrated to help us understand the structure, content, and function of health-related beliefs. In other words, culture exerts an enormous influence on health beliefs and resulting health behaviors. In order to design our health interventions for ethnic populations in the United States, we must examine the health beliefs of these populations. Landrine and Klonoff reviewed the literature and found that the major etiological agents of illness include (1) violations of interpersonal norms; (2) violations in carrying out social roles; (3) expressions of certain emotions such as anger, envy, or jealousy; (4) violations of moral or religious taboos; and (5) exposure to certain natural agents, such as hot and cold foods or certain weather conditions, and to certain bodily states, such as the condition of one's blood. In addition, Murdock (1980) reviewed the etiological agents of illness in 189 cultures and found two major categories: natural and supernatural causes of illness. Therefore, the individual's or family's beliefs about the causes of illness determined who conducted the diagnosis, what the treatment modalities might entail, how effective the treatment modalities were for the health condition, and whether the victim was stigmatized by the illness. Symptoms or dysfunction in certain bodily locations produced varied levels of shame or stigma and shaped the help-seeking behaviors.

Cultural competence in primary health care requires an understanding of the historical lessons that have been ingrained in the memory of ethnic families and communities. For instance, the

internment of Japanese Americans during World War II shaped the psychology of subsequent generations of Japanese Americans. The Tuskegee experiments on African Americans have left many Blacks wary of the medical community. Jones (1993) reviewed the experiments conducted on African-American men who were diagnosed with syphilis but not treated because scientists were interested in the long-term effects of this disease. This and other similar episodes in history (radiation exposure framed as treatment for terminally ill patients, instances of germ warfare releases, etc.) conducted in the name of science have made ethnic communities cautious of research, believing it will have little positive results on their own lives. They may also avoid involvement in research studies because of language barriers, lack of knowledge about the importance of their participation, or fear of deportation.

Given the poor health status of Native Hawaiians and Pacific Islanders, a much closer examination of traditional Hawaiian and Pacific Islander medicine and healing practices must be undertaken (Blaisdell, 1989; Bushnell, 1993; Chun, 1994; Mokuau, 1998; Wegner, 1989; Parsons, 1985).

Asian medicine has been studied systematically by Chinese healers and, more recently, by Western providers. The Chinese have practiced a worldview on health for more than 3,000 years, and this worldview is the basis for the traditional health beliefs of many Asian populations. Information of this worldview provides insight into its impact on the health status of the Chinese people and their adaptation to life crises. This insight can help shape culturally competent health interventions for AAPI communities. Chinese medicine regards the mind, body, and spirit as an integrated whole in which each component influences the others (Pachuta, 1993). The goal of Chinese medicine is to preserve health and cure disease by recovering the balance within the human being and between the person and the surrounding environment. The four foundations of health are blood (*hsueh*), nourishment (*ying*), energy (*chee*), and resistance (*wei*). Blood and nourishment together form the yin and circulate internally within the body. The energy and resistance together form the yang that emanates externally to the body and protects the yin (Reid, 1995).

Chinese healing arts include nutrition and dietary therapy, exercise, meditation, acupuncture, and herbs (Cohen & Dover, 1996). Chinese medicine also regards six environmental conditions—wind, cold, heat, dampness, dryness, and fire—as external causes of disease (Reid, 1995). These conditions can be manifested internally by overstimulation of internal organs as a result of alcoholism, frequent outbursts of anger, or overindulgence in rich foods or sex; or externally as extreme or out-of-season weather patterns. The greatest danger is that rapid shifts in these environmental conditions can wreak havoc on the human energy system and its defenses. Anger, joy, grief, fear, exhaustion, and worry exact a toll on the energy system that maintains good health. Artificial environmental systems such as air conditioning, central heating, microwaves, and radiation are more damaging than natural or seasonal weather changes.

Very little research has been conducted in the area of modifiable health risks, beliefs, and practices that contribute to disease among minority populations. Equally important areas that must be empirically examined are how acculturation influences the development of preventable diseases and what the most effective mechanisms are for helping newcomers adopt and maintain healthy American lifestyle habits and reject poor ones. The critical variables suggested by research on other minority groups are ethnicity and racial differences (e.g., not all Vietnamese come from the same ethnic/racial background), socioeconomic status, health beliefs and basic knowledge concerning health, and traditional lifestyle behaviors related to health (diet, exercise patterns, etc.) (e.g., Heckler, 1985; Yee, 1996, 1997a, b, c, d, e; Yee et al., 1995; Yi, 1995).

Yee (1997e) has found that health knowledge regarding chronic health conditions and diseases could be significantly improved among elderly Asian-Americans and Pacific Islanders. In a community-based study of elderly Vietnamese Americans, Yee (1997e) found that knowledge regarding lung cancer, strokes, and diabetes could be improved. These elderly Vietnamese could identify smoking as a major cause of lung cancer but were less knowledgeable about the symptoms and preventive or therapeutic interventions. Knowledge of the risk factors for and symptoms of

diabetes were poorer than comparable knowledge of lung cancer. Yee found that effective health education and promotion could improve knowledge about chronic disease risk among Southeast Asian refugees and immigrants.

Likewise, Lip, Luscombe, McCarry, Malik, and Beevers (1996) found that Southeast Asians were least likely to exercise regularly and were less aware of cholesterol or the dietary content of their foods than were either Whites or Afro-Caribbeans in England. These factors may contribute to the higher prevalence of coronary heart disease among Southeast Asians.

There is a unique opportunity to examine modifiable risk factors, beliefs, and practices among Vietnamese elders. This population is currently undergoing cultural, socioeconomic, and acculturative transitions to American lifestyles. Several American lifestyle habits (e.g., high-fat and low-fiber diets, sedentary lifestyle) are not any healthier than some traditional Asian lifestyle habits, and efforts must be made to avoid the unhealthy choices. While one study found that traditional Southeast Asian adults were more likely to smoke heavily than were their more acculturated counterparts (Chen et al., 1993), Yee and Thu (1987) found that smoking, drinking, and gambling were among the negative coping strategies that Vietnamese refugees used to deal with the stress of acculturation.

Holistic Health Approach

We must take a more holistic approach to people, a yin-yang approach to exploring the healthy-unhealthy behaviors or strengths and weaknesses of individuals within their social context (Pachuta, 1993; Ramaswami & Sheikh, 1993). The body, mind, and spirit are integrated. Imbalance in one area systematically affects the other two. This holistic worldview is held by many ethnic communities in this country and around the world. We see a similar view emerging in the Western medical community. The current fragmentation of research and service programs must move toward integration in order to most effectively prevent unhealthy conditions. In the late 1970s, people said that Southeast Asian refugees would not come to mental health services. However, at the Asian Pacific Development Center in Denver, many Southeast Asian refugees used

English-as-a-second-language training; job training; cultural orientation classes; and clothing, housing, and furniture services; and these resources facilitated the refugees' use of the center's mental health services. The lesson learned is that people in need typically require multiple resources in addition to mental health services. Integrated services that are culturally competent and offered at a single point of contact are more likely to be used and yield more positive outcomes.

Primary care practitioners have a pivotal role in the prevention, management, and treatment of health conditions (Bradley, 1994; NCHS, 1997). Managed care systems give primary health care providers the responsibility for managing the patient's health. However, this responsibility comes with the added obligation for acquiring the skills to meet the needs of an increasingly diverse client population. The primary health care professional must be able to engage in culturally competent communication and screening of ethnic populations that may be more or less susceptible to underlying health risks. The primary health care professional must be able to conduct culturally competent assessment interviews, be prepared to use bilingual interpreters effectively, and be able to probe in a culturally competent manner. Effective management of health conditions demands that the primary care professional be able to use culturally competent tools and techniques—biological and physiological therapies, and especially social and behavioral tools (Patel, 1996)—to increase health promotion and disease prevention among ethnic populations; help patients choose workable goals; refer patients to other appropriate services; and provide interventions, counseling, and motivational strategies and followup to maximize success.

The Commonwealth Fund (1995) conducted a national survey comparing the health experiences of African American (1,048), Hispanic (1,001), Asian (205 Chinese, 201 Korean, 201 Vietnamese), and White (1,114) adults in the United States. Lack of insurance and lapse of insurance coverage were bigger problems for minority Americans—preventing them from taking medicine that they could not afford, delaying needed medical tests, and so on. These problems are likely to increase with welfare reform that excludes noncitizen residents from care. Minority adults also had

little or no choice regarding where they obtained health care—a particularly acute situation among Asian and Hispanic Americans. Barriers to care included high costs, long waits, poor access to specialty care, and language barriers. Ethnic minorities were less likely to be satisfied with their care. Vietnamese, Mexican, and Puerto Rican adults received less preventive care than did their White counterparts—and there was a notable lack of such routine testing as blood pressure tests, PAP smears, and cholesterol readings. Multiple stressors, fear of violence, and health-damaging behaviors add to the health problems of minority adults.

The Commonwealth study (1995) found that Chinese, Korean, and Vietnamese respondents who were 18 years of age and older often lacked insurance, could not afford the costs of health care, did not have a regular doctor, and were less satisfied with health care services. Forty-seven percent of the Vietnamese respondents who had visited the doctor in the last year did not receive preventive care services such as blood pressure tests, PAP smears, or cholesterol screening, compared with only 25 percent of White adults. The study suggests that we have much health and mental health prevention work to do in Asian-American and Pacific Islander communities, especially among poorer and non-English-speaking AAPIs.

Multidimensional Approach

We know that clusters of risk factors occur across many health conditions for the poor, inner-city residents, and the elderly (Yee et al., 1995); so we must implement multidisciplinary research, planning, programming, and interventions. We cannot miss the opportunity to make behavioral and social scientists, including culturally competent advisors, essential members of the HMO team. This shift toward identifying important behavioral health risks is not the only philosophical shift that is required. We also need to balance our research efforts to study the yin and the yang of each health condition and possible intervention. Major researchers who have studied animals and people who exhibit learned helplessness and depression (the yin) (Seligman, 1977; Seligman,

1990) are now working on the concept of learned optimism (the yang) and on the prevention of learned helplessness. These researchers have discovered how organisms learn to become helpless and then become depressed. Seligman and colleagues have come up with an "inoculation," or prevention, plan that can teach people to overcome negative outcomes and become resilient in their efforts to cope with life's setbacks. Resilient and competent individuals come from all segments of our society, even from the most deplorable of circumstances. These multiple profiles of survival and successful adaptive strategies must be examined in the context of multiple ecological niches (e.g., sociocultural context). The challenge is to determine what these survival profiles and patterns of human competence may look like within specific cultural and ecological perspectives. A particular behavior or comment taken out of context may appear maladaptive at first glance. When context is taken into consideration, the behavior could be viewed as adaptive for the particular environmental conditions.

Rutter (1996) argued that the social context must be taken into account when understanding the psychological threat; in other words, there are individual differences in perceptions of stressful situations. Rutter suggested that there are mediating mechanisms, such as social cognition, that moderate the impact of stressors to produce various levels of risk. The study of resilience must incorporate the presence of positive factors, as well as the absence of negative ones. These positive and negative factors can have differential effects at sensitive stages of the life cycle.

In a community-based study of more than 1,000 Vietnamese refugees, Yee and Thu (1987) found that mental health issues were intimately related to substance abuse and behavioral health strategies. For example, the authors found that many young and middle-aged Vietnamese refugees, especially males, used smoking, alcohol consumption, and gambling to relieve the negative emotional and psychological effects of acculturative stressors. The relationship among alcohol use, smoking, and stress or other mental health factors such as depression has been well documented.[2] Acculturative stressors and mental health issues such as depression are not often systematically incorporated into our conceptualizations, assessments, and service delivery, yet they are significant variables to consider for AAPI populations.

Key research on protective factors, social supports, and health promotion behaviors in a cultural context should be an integral part of any health research project. There is very little research in these areas; thus, they must be studied with a focus on risk and health-destructive behaviors (American Psychological Association, 1995). The behavioral and social sciences can play a critical role in research into the context, characteristics, and determinants of risk behaviors, and can play a pivotal role in developing, implementing, and assessing prevention programs (Snider & Satcher, 1997). Resiliency and the inability to adapt exist in all segments of our society. However, there are dangers in focusing only on problems and risk factors in our scientific endeavors.

For instance, potential research subjects may be more inclined to participate in a study if their strengths as well as their problems are the focus. Millar and Millar (1995) argued that thinking about disease detection behaviors rather than health promotion may have negative affective consequences. For these authors, disease detection behaviors provide opportunities to detect precursors to disease and illness and thus may generate negative affective consequences if an actual disease is found. Health promotion behaviors, on the other hand, provide behavioral plans of action to promote health. In traditional Chinese medicine, the healer did not get paid if the patient became sick because the healer failed to keep the person healthy. A growing amount of health behavior literature suggests that rational-cognitive considerations are less important than emotional-affective considerations (see literature review in Millar & Millar, 1995). It appears that how one feels about health and health interventions may be more critical than how one thinks about health. Health decisions appear to be based on emotional overtones that are influenced by cultural scripts (Kitayama & Markus, 1994).

Our health research designs must become more sophisticated to account for the complexity of factors that influence health status among human beings. For instance, Abou-Donia, Wilmarth, Jensen, Oehme, and Kurt (1996) found that when Gulf War personnel were simultaneously exposed to the insect repellents DEET and permethrin and the antinerve agent pyridostigmine bromide, they experienced the toxic effects of the chemicals synergistically

in combination. More interesting, at a recent conference of the Experimental Biology Society (*U.S. News & World Report,* April 14, 1997), Abou-Donia reported that when stress was introduced to the combination of these three chemicals, the brain's defenses were weakened and more prone to damage, thus producing Gulf War syndrome—the headaches, fatigue, joint pain, and other disabilities claimed by more than 30,000 Gulf War veterans. Studies suggest that stress-producing environmental situations—such as war—coupled with multiple chemical exposures make humans more vulnerable to serious health conditions. Thus, it appears that stress and mental health status can intensify or moderate a person's vulnerability to environmental conditions and toxic exposures that lead to disease and poorer health.

Another compelling reason for doing cross-cultural health research among ethnic minorities in our society is to test our theories and findings across a diverse set of conditions that are uniquely contributed by ethnicity, social class, and gender. This type of research gives rise to universal human theories of health. For instance, Reisch and Tinsley (1994) found that among impoverished Latino, White, and African-American women, those with higher internal locus of control were less likely than those with higher external locus of control to receive adequate care contrary to prior results found among middle-class samples. This study and others suggest that the patterns found among key predictors of health behaviors may differ from one social class to another. Likewise, some relationships between predictors of health behaviors found among White individuals may not be found in ethnic communities and across genders.

As Krieger, Williams, and Moss (1997) described, the measurement of social class is not a simple matter but is complex at best. These authors argued that social inequities in health may be produced by the socioeconomic context at the individual, household, and neighborhood level. Moreover, they stipulated that these levels of social class may influence ethnic groups and men versus women differentially across time. Components of socioeconomic context exact their influence across both material and social deprivation. This influence is cumulative and has synergistic health effects over a lifetime.

Improvement in Prevention Research Methodology and Instrumentation

We must improve prevention methodology and instrumentation in order to generate adequate databases and promote effective prevention interventions for minority communities. The inherent problem in conducting cross-cultural or ethnic-specific research is that our scientific methodologies come directly from our theoretical frameworks, and our theoretical frameworks come from American and European cultures. It is not wise to "throw out the baby with the bathwater"; however, we must proceed cautiously in applying these theoretical frameworks and methodologies to new populations.

The dilemmas involved in conducting culturally competent research are neither simple nor straightforward. They may involve numerous steps to check both the validity of research questions and the manner in which these questions are asked. For instance, even definitions of race/ethnicity can be confusing: Are subjects Black, African American, or Jamaican; Asian, Pacific Islander, Southeast Asian, or Vietnamese; Latino, Mexican American, Hispanic, or Brazilian? What about biracial or multiracial backgrounds? Are these races/ethnicities self-designated or are they assigned by the interviewer or by someone else?

The reliability and validity of our assessment tools are critical. Geisinger (1992) described issues in cross-cultural normative assessment (figure 1.1), specifically translation issues and adaptation of assessment instruments. He argued that test adaptation has replaced test translation. But there are many pitfalls and the science of cross-cultural instrumentation remains in its infancy. He also pointed out that we must consider whether a measure from one culture and language can be adapted to another. Here we deal with issues such as vernacular or geographic differences in frames of reference, educational levels, socioeconomic status (SES), familiarity with tests, test-taking skills, and abilities.

1. How should a measure from one language and one culture be adapted to another language and culture?
   a. Translate and adapt the measure (translator-gender, cohort/age).
   b. Review the translated or adapted version of the instrument.
   c. Adapt the draft instrument on the basis of the reviewers' comments.
   d. Pilot test the instrument.
   e. Field test the instrument.
   f. Standardize the scores—possibly equate them with scores on the original version.
   g. Perform validation research, as appropriate.
   h. Develop a manual and other documents for users of the assessment device.
   i. Train users.
   j. Collect reactions from users.

2. How does one know whether a measure adapted to a new language or culture measures the same construct or constructs that it did in the original language or culture?
   a. Construct related validation—a factor-analytic technique applied to test data.
   b. Develop confirmatory factor-analytic models to test whether adapted assessment device measures the same qualities in the same proportions and with the same factor structures (i.e., item-factor loadings) as the original. Requires large, representative samples—controlled for gender and comparable educational level.

3. Is the newly adapted measure useful once it has been fitted to a new culture and language?

4. Do scores from the new instrument mean the same thing as they do in the initial culture and language?
   a. Almost all tests that are adapted to a new language or culture need to be renormed so that scores on the new version can be studied. Identical scores may have different psychological, health, and social meanings across cultures.
   b. O'Brien (1989; 1992) provides a technique to do concomitant construction, norming, and equating of two forms of a test using elementary item-response theory (scale development, item calibration, item validation, and person-measure validation).

Figure 1.1—Cross-cultural normative assessment.

Source: Geisinger (1992).

It is also critical to ensure that instruments or tests developed and normed on White, middle-class populations and then applied to ethnic minority populations are valid and reliable for those minorities. A test's validity and reliability could be a life or death matter. Last year, Walter Reed Hospital found that the prostate-specific antigen test and its age normative values for detecting prostate cancers failed to pick up 40 percent of these cancers in a sample of African American men (Morgan et al., 1996). Such failures can be the result of using inappropriate norms for ethnic minorities. Clearly, efficacy and outcome studies must be conducted to ensure that treatments developed using White and male populations work well among ethnic minority and female populations.

Environmental and behavioral risk factors must also be taken into account because these factors may not have the same impact across ethnic groups or genders. Susceptibility to lung cancer is influenced by genetic polymorphism in the human cytochrome P4501A1 gene (CYP1A1), which produces an enzyme to metabolize carcinogens found in cigarette smoke (Crofts, 1995). Asian-Americans have more of this genetic susceptibility than do Whites. African Americans have a higher polymorphism not associated with total lung cancer, but significantly associated with lung and prostate cancers in smokers. Smoking and environmental exposure to carcinogens produce quite different health outcomes across racial groups because higher proportions of different populations may lack the enzyme that neutralizes these carcinogens.

Le Marchand, Sivaraman, Franke, and Wilkens (1995) found that the rate of colorectal cancer among Japanese Americans has surpassed that of Whites. A population case-controlled study found that Japanese Americans living in Hawai'i had a 50 percent greater intake of red meat and processed meat, and had genetic polymorphism in NAT2 and CYP1A1—the genes involved in metabolizing carcinogens in red meat. This genetic susceptibility puts Japanese Americans at higher risk of colorectal cancer with acculturation to Western diets.

A population-based case-controlled study of prostate cancer among African Americans, Whites, and Asian-Americans in Los Angeles, San Francisco, Hawai'i, Vancouver, and Toronto (Whittemore et al., 1995) found a significant relationship between high total fat in-

take and prostate cancer risk for all ethnic groups. However, saturated fat intake was associated with higher risks for Asian-Americans than for African Americans and Whites. This study suggests that equivalent saturated fats in the diets of Asian-Americans had a more negative impact for this group than for other ethnic groups. In other words, the same fat intake produced a higher risk of prostate cancer for Japanese Americans. The study also suggests that although objective circumstances may be equivalent, there might be a differential risk when population genetics, and prevalence of comorbid conditions are coupled with additional environmental factors such as social class or language barriers.

Finally, culturally competent primary care must consider ethnic differentials in therapeutic effects, metabolism, and side effects of standard drug therapies and dosages. The Food and Drug Administration currently requires drug efficacy data on pediatric and geriatric populations, but data on ethnic differentials are needed as well. Lin, Poland, and Nakasaki (1993) found significant psychopharmacologic and psychobiological effects related to ethnicity effects among individuals using psychotropic drugs for psychiatric disorders. We have a clear example of an ethnic differential in the higher frequency of alcohol sensitivity among Asian versus White populations. Yoshida (1993) reviewed the literature on genetic polymorphism of alcohol-metabolizing enzymes and alcohol sensitivity. The author suggested that Asians have a higher prevalence of an alcohol-rejecting genetic factor. Clearly, more basic and applied research must examine the ethnic differentials in therapeutic effects, metabolism, and iatrogenic effects of drug therapies and dosing standards for AAPI and other ethnic minority populations.

Summary

Lessons learned in the mental health arena over the past 30 years and in the substance abuse prevention field more recently can guide the development of culturally competent primary care for Asian-American and Pacific Islander populations. The managed care health environment has put primary health care providers in a unique position to improve access to care and the health status of our most vulnerable Asian-American and Pacific Islander individuals. Figure 1.2 lists key questions that providers must explore as part of the task at hand.

1. What are some health conditions that disproportionately affect ethnic-specific AAPI groups? Are these conditions consistent with our model minority health stereotypes of AAPI populations?
2. What are the underlying causes of these ethnic differences (genetic, environmental exposures, psycho/socio/cultural factors and health beliefs, lifestyle practices, education/social class, etc.)? How do these causative, moderating, and mediating variables interact and exert their influence on health promotion and disease prevention?
3. What do AAPI individuals/communities perceive to be the causes of these diseases and poor health? Conversely, what do AAPI communities perceive to be the best methods/interventions to prevent disease and promote health in their own community?
4. Do AAPI individuals/communities perceive themselves at risk for health-damaging conditions?
5. From the individual or family perspective, are the costs/benefits of engaging in health-promoting behaviors versus continuing health-damaging behaviors the same across AAPI ethnic groups/social classes/age and gender groups?
6. How can research designs become more culturally competent for AAPIs?
7. What are some effective subject recruitment strategies that work in AAPI communities (inclusion of AAPI populations in clinical trials, etc.)?
8. What steps must be taken to increase reliability and validity of research protocols/instruments and research methodologies for AAPI communities?
9. What are some issues surrounding translation of instruments into AAPI languages? Are the AAPI individuals/families literate (i.e., reading/writing) in their native language?
10. Do current health interventions (drug therapies, treatment modalities, compliance strategies, screening efficacy) produce effective outcomes for AAPIs?
11. What are the help-seeking patterns among AAPI individuals and families? What is the impact of differential access to health care?
12. How can interactions between patients and health care professionals become more culturally competent for AAPI families?

Figure 1.2—Key questions to be explored by primary health professions in developing culturally competent care.

Source: Yee (1997b).

Epidemiological studies of substance abuse among AAPIs suggest lower levels of abuse than do local and regional studies or AAPI ethnic-specific or cohort studies. AAPI populations try to hide substance abuse problems because of the stigma these problems carry. In addition, AAPI families and communities have a poor track record for detecting these problems. These two factors may account for the discrepancies in research findings regarding AAPI substance abuse. The chapters that follow illustrate how cultural competence in prevention and evaluation of substance abuse problems can be infused into primary care for Asian-Americans and Pacific Islanders. This infusion can also be achieved across other health promotion and disease prevention efforts targeted to AAPI populations.

Recommendations

The system-wide teaching of cultural competence for health professionals serving a wide variety of patient populations is mandated to improve the quality of life and health status of our most vulnerable citizens (Ethnogeriatrics Study Group, 1995). Higher education must seize the opportunity to creatively improve the cultural competency of our primary health care education and training. It is, however, the responsibility of our Federal and State governments to facilitate these changes through social and economic policies in order to increase the access, quality, and efficacy of our health care system. The Federal Government should sponsor model education and training programs that are culturally competent and should disseminate, implement, adapt, and evaluate these programs in ethnically dense locations across the United States.

In order to accomplish these goals, our national research efforts need to follow the approach of the Agency for Health Care Policy Research in its Patient Outcomes Research Team (PORT) studies. These studies pool empirical data for health conditions and their respective therapies across patient populations in order to examine the efficacy of various interventions. Using such an approach we may discover that certain therapeutic interventions work with only certain patient profiles. Our job then is to do the

research to determine which therapeutic interventions work best with which patients, taking into account their health characteristics and sociocultural profiles. The Federal Government should solicit grants and award contracts to improve the data on AAPI populations.

Another critical piece of this effort to improve the health status of AAPIs is the long-term funding of Medical Treatment Effectiveness Programs (MEDTEP). These programs examine the efficacy of medical treatments available to Asian-Americans, Pacific Islanders, and other ethnic minority populations. Funding is also needed for centers of excellence to conduct AAPI health research and to develop cultural competence among primary health care professionals. Although Asian researchers are adequately represented in the biomedical health areas, their research is typically focused on the science of improving the human condition. Few Asian health researchers focus on AAPI health. Pacific Islander researchers are underrepresented in the biomedical field. This fact, along with their poor health status, justifies research targeted to their health conditions as well. Centers of excellence should be mandated to develop culturally competent health care practitioners, researchers, and tools to meet the great and expanding needs of our AAPI populations.

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Endnotes

1. For a review of these issues, see Behavioral and Sociocultural Perspectives on Ethnicity and Health, Special Issue, *Health Psychology* (1995), and *Journal of Gender, Culture and Health* (1997); Zane, Takeuchi, & Young (1994); Proceedings for first national summit of Asian-American and Pacific Islander health organizational leaders (1996); and Asian-American Mental Health, *Journal of Community Psychology* (1994).
2. See review in National Institute on Alcohol Abuse and Alcoholism (1996); Schoenborn & Horm (1993).

2

Culturally Competent Evaluation of Substance Abuse Prevention: A Framework for Asian-American and Pacific Islander Programs

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Editor's Note: *These authors expound on the challenge and difficulty of developing cultural competency. As Yee suggested in chapter 1, quality health care has multidimensional aspects that go beyond the provision of health services to include research and evaluation aimed at continually improving health status. Culturally competent primary care professionals must be flexible and adaptable, as must be those who conduct culturally competent evaluation or research.*

The challenge for primary health care providers and researchers is to improve their understanding of the Asian-American and Pacific Islander populations they will serve or evaluate. They must know the etiological factors at work in the AAPI group they are targeting, and they must be aware of the group's understanding of those factors. Just as etiological factors vary by AAPI's acculturation status, generation, area of residence, and other elements, so too will prevention programming strategies and evaluation

methods. Including a cultural specialist in all steps of the process is critical. This specialist can provide cultural understanding and language translation to the primary health care or evaluation team. The result will be improved access to AAPI communities and better health care for the many and diverse groups of Asian-Americans and Pacific Islanders.

Introduction

What comprises a culturally competent evaluation of a substance abuse prevention program? In the absence of a commonly shared definition, we will describe it operationally as an evaluation based on ethnic and community values, traditions, and customs. Many prevention professionals assume or expect that program evaluation is relatively simple. Some incorrectly assume that they can successfully conduct a culturally competent evaluation after brief exposure to the topic, such as given in this volume.

This chapter underscores the fact that there is no simple or concise way of doing a culturally competent program evaluation, and in the process provides a conceptual framework for engaging or improving culturally competent evaluations. We also describe some of the complex steps one must follow in order to achieve a more culturally competent evaluation of prevention programs in Asian-American and Pacific Islander communities.

A Program Evaluation Framework

Figure 2.1 depicts seven essential components of a framework for culturally competent program evaluation. The principles, conceptualized as cells in this figure, are as follows:

1. There is a need to understand the etiological factors that contribute to substance abuse in the general population and in the ethnic/racial population under consideration.
2. There is a need to comprehend the cultural and religious makeup of the individuals in the target population, their socioeconomic characteristics, their aspirations, their substance-using patterns and trends, their immigration or annexation history, and their lifestyles.

3. There is a need to identify the underlying rationale for the prevention approaches and strategies chosen, given the theoretical, cultural, and contextual information obtained from cells 1 and 2. Some of the leading prevention models used in AAPI communities are the case-management model, family-oriented strategies, the information-deficit model, the empowerment model, the cultural enrichment model, the mutual support model, the vocational training model, and the alternatives or recreational model.
4. The prevention program and the evaluation team need to identify the most appropriate strategies for recruiting and retaining clients. These strategies will, obviously, be influenced by the knowledge of the target population (cell 2) as well as by the type of prevention approaches and strategies adopted by the program agency (cell 3).
5. Given the information obtained from cells 1 through 4, the evaluation team will be in a better position to choose evaluation strategies and methods. Relevant issues include the availability of control groups, choice of survey methods, logistical considerations in accessing respondents, the kind of evaluation instruments to be used, issues pertaining to language and cultural translations, the extent of client involvement in gathering the raw data for both process and outcome evaluations, and the choice of process and outcome measures for monitoring the program at the field level.
6. The cumulative understanding gained from cells 1 through 5, as well as the evaluation budget available, will dictate the kind of evaluation design that can be employed most efficiently, such as quasi-experimental designs (Cook & Campbell, 1979) or single-system designs (Kim, McLeod, & Shantzis, 1992).
7. Finally, project results must be disseminated in a manner that satisfies the various groups affected by the prevention project. Different types of reports will be required for different consumers of the evaluation.

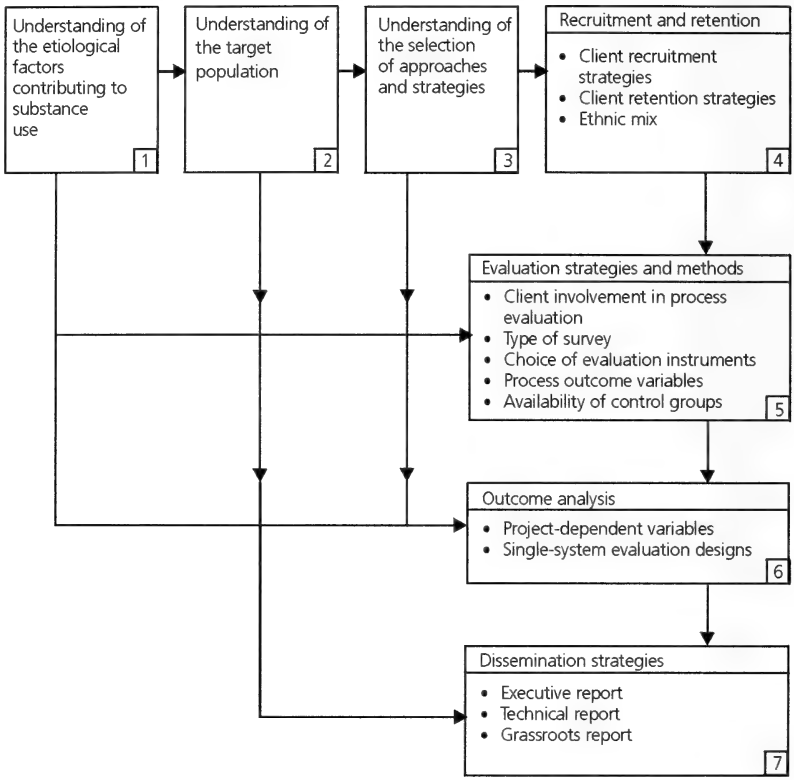

Figure 2.1.—A framework for culturally competent program evaluation.

The framework introduced here follows the natural and logical progression of prevention programming and evaluation activities that need to be implemented in a community-based substance abuse prevention program. These seven steps are depicted in the abstract, in the hope that the framework might be applied not only to AAPI programs but to programs involving other ethnic/racial groups as well. The steps increase in level of concreteness and thus in level of practical applicability in field settings, from cell 1 to cell 7.

As we discuss the components of the framework, we will rely heavily on deductive reasoning to progress from one cell to the next. Specifically, our goal is to build a network of logical bridges that connect these cells identified in the framework.

Cell 1: Understanding the Etiology of Substance Use

We must make it explicit from the outset that social science research cannot be conducted in a manner that is context free or purely theoretical. Therefore, all prevention evaluation must be based on a clear understanding of many factors, which together determine the program's outcome.

The first task of all prevention programs and evaluations (i.e., collaborative evaluations) is to have a general understanding of the etiological factors that contribute to substance use in the general population and in the target population in particular. Substance use by Asian-Americans and Pacific Islanders is influenced by many of the same factors that influence use by Whites. Risk factors often cited for Whites include low religiosity, low self-esteem, perception of incohesive family relationship, stress, negative peer pressure, excessive rebelliousness, lack of value attachment to school, poor student-teacher relationship, and negative social attitude (Cooper, 1983; Hawkins & Weise, 1985; Jessor, Chase, & Donovan, 1980; Kandel, 1982; Kaplan, 1980; Kaplan, Martin, & Johnson, 1986; Kim, 1981; Kim & Newman, 1982; Maddahian, Newcomb, & Bentler, 1988; Murray & Perry, 1985; Polich, Ellickson, Reuter, & Kahan, 1984).

To these factors that are shared across cultures, we must add a host of other culture- and situation-specific variables pertinent to the Asian-Americans and Pacific Islanders: cultural values, traditions, attitudes, and beliefs; socialization to the native culture; acculturation to the dominant values of the host culture; the acculturation processes leading to cultural conflict, including the generation gap; family conflicts; role conflicts; alienation and identity conflicts; economic stresses; and other situational factors defined by immigration and annexation history.

There are three major approaches explaining substance use among Asian-Americans and Pacific Islanders: (1) the cultural content approach; (2) the cultural interaction approach; and (3) the cultural conflict approach. Since these competing approaches are discussed in a greater detail elsewhere (Kim, McLeod, & Shantzis, 1992), they will be described only briefly here. Depending on the theoretical foundation on which prevention programs are based, these three approaches will have specific but different consequences in all other steps in the framework.

Cultural Content Approach

According to the cultural content approach (Kim, McLeod, & Shantzis, 1992), cultural backgrounds and norms governing substance use in various cultures differ, and these cultural content factors are the sole determinants of substance use. For example, Austin, Prendergast, and Lee (1989) noted that drinking among Asians is more social than solitary, occurs in prescribed settings, usually occurs with consumption of food, is used more to enhance social interaction than as a method of escapism, and occurs within the context of moderate drinking norms. These factors may account for some of the variations in drinking behavior between Asian-Americans and Whites and the significantly lower prevalence of alcohol use among Asian-Americans than among Whites. Likewise, many studies, perhaps starting with Ullman (1958), have argued that uncertainties and mixed messages in the culture about alcohol use produce ambivalent feelings about drinking in individuals, and that these feelings increase the probability of problems once an individual begins to drink (Peele, 1987; Room, 1976).

Thus, prevention programs founded on the cultural content approach are likely to choose prevention approaches that include family-oriented strategies or the cultural enrichment model (cell 3). This approach implies that the intervention is designed to bring about not only attitudinal changes in accordance with cultural norms, but also an overall reduction in the dispersion (i.e., standard deviation) of the substance use attitudinal distribution over time (cell 6).

Cultural Interaction Approach

The cultural interaction approach attempts to explain substance use on the basis of the different processes through which individuals in an ethnic/racial culture adapt to the larger White mainstream culture. There are two leading theories associated with this approach: acculturation theory and orthogonal cultural identification (OCI) theory.

Acculturation theory is based on the assumption that cultural transition occurs along a single continuum, on which increasing identification with the dominant culture implies diminishing identification with the ethnic/racial culture. According to acculturation theory, the level of acculturation will determine the degree to which substance use among Asian-Americans and Pacific Islanders will approximate use in the dominant culture (Kim, McLeod, & Shantiz, 1992).

On the other hand, OCI theory suggests that there are numerous dimensions of cultural identification and that increasing identification with the dominant culture does not imply diminishing identification with the ethnic/racial culture. According to Oetting and Beauvais (1990), higher cultural identification is related to positive psychosocial characteristics. Thus, strongly bicultural individuals have the highest self-esteem and the strongest socialization links, whereas the anomic person (one who does not have a high level of identification with either culture, native or host) is expected to show the lowest self-esteem and the weakest links to socialization systems such as family and school. Again, as applied to Asian-Americans and Pacific Islanders, native and host cultural identifications are expected to coexist and function as essentially equivalent sources of personal and social strength. Therefore, those with strong bicultural identification are expected to have the lowest substance use because they are simply more adaptable than those who have weaker bicultural identification.

The implication of OCI theory for prevention programming is that it is important to teach the cultural norms of the native culture or cultures that individuals want to know or associate with. Such is the case with many ethnic/racial-oriented prevention programs whose strategy is based on the cultural enrichment model (cell 3). Thus, prevention programs that are founded on OCI theory

need to consider some of the main constructs used in the theory, such as the construct measurements (cell 5) of acculturation, alienation, biculturalism, and anomie. We refer to these constructs as process outcome variables rather than project-dependent variables because they help the evaluation team monitor whether the project is moving in the right direction before its final outcome can be observed through the project-dependent variables. An absence of significant changes in substance use, attitudes toward use, or intention to use (i.e., project-dependent variables), in the presence of unambiguous evidence of the program's success observed through process evaluation, could indicate a problem with underlying theory rather than a program failure.

Cultural Conflict Approach

The cultural conflict approach is based on the assumption that substance use among Asian-Americans and Pacific Islanders is influenced by the clash of cultural values they experience during their adjustment to the mainstream American culture. The sources of conflict are many and may include the generation gap, family conflicts, role conflicts, alienation, and identification conflicts. To address these conflicts, a host of intervention strategies have been devised that include family-oriented strategies, the cultural enrichment model, the mutual support model, the alternatives or recreational model (see cell 3), as well as communications enhancement and other life skills training approaches (Botvin, 1983).

Some of the process variables (cell 5) that may be applied to prevention programs based on the cultural conflict approach can include scales for the perception of family cohesiveness (Kim, 1981) and communication or listening skills (Kim, n.d.).

Cell 2: Understanding the Target Population

With this general understanding of the theoretical base of substance abuse problems, the collaborative evaluation team proceeds to the task of understanding more about the target population in terms of its constituent characteristics, such as history, immigration or annexation history, refugee status, cultural and religious traditions

and their erosion, demographic characteristics, substance use patterns, and socioeconomic factors that may have implications for substance use. In the process of understanding the target population, the collaborative evaluation team needs to pay special attention to other situational high-risk factors dictated by economic stress, especially among immigrant and refugee families.

Understanding these complex factors will help the collaborative evaluation team determine the most appropriate prevention strategies to be used (cell 3). For example, it has been found that recent immigrants and refugees who are experiencing serious economic stress (cell 2) can be served best through a case management model (Cross, Bazron, Dennis, & Isaacs, 1989).

Understanding the cultural and historical background of some of the immigrant and refugee populations from Indochina (cell 2), for example, will also help prevention professionals and evaluators determine the appropriateness of mixing different ethnic/racial groups in the same room for a workshop or for training (cell 4). This understanding will also help the collaborative evaluation team determine the most appropriate strategies for recruiting and retaining the target population (cell 4).

Cell 3: Prevention Program Approaches and Strategies

An understanding of the etiological, cultural, and other risk and resiliency factors affecting the target population (cells 1 and 2) will help the collaborative evaluation team understand the logic behind the program agency's selection of certain prevention approaches and strategies (cell 3). It will also help the evaluation team understand the cultural appropriateness of the modes of program delivery and the implementation of the prevention strategies, especially those pertinent to recruitment and retention of clients (cell 4).

What follows is a list of prevention approaches used in AAPI settings. These models are briefly described here; detailed descriptions are presented elsewhere (Kim, McLeod, & Shantzis, 1992). Whenever possible, an effort is made to establish a conceptual link between the model under discussion, the approaches enu-

merated in cell 1, and the process outcome measures chosen (cell 5). These prevention models are not mutually exclusive, and they are not the only prevention strategies available to programs working with Asian-Americans and Pacific Islanders. It is hoped that further research by others will extend the list assembled here.

Case Management Model

The case management model is based on the assumption that no prevention or intervention services can be successful unless the basic needs of the clients are addressed (Cross et al., 1989). This is especially true for many recent immigrant and refugee families, whose needs are both economic and emotional. As a mainstay of prevention strategies for many Asian refugees and immigrants, the case management model is founded implicitly or explicitly on the increase in risk resulting from economic stress (cell 2) and cultural conflict theories (cell 1).

For community-based prevention programs that use this model, the evaluation system must be ready to gauge the degree to which the programs are ready to accommodate these and other basic needs that mainstream service agencies may assume are being met. Programs targeted toward refugee or immigrant populations need to offer services that are suited to them, and the evaluation team needs to consider these services as the programs' concomitant process outcome variables (cell 5).

Family-Oriented Strategy

Family-oriented strategies are among the most important types of prevention strategies used in AAPI settings. These strategies are based on knowledge of traditional Asian and Pacific Islander culture, which places the family's needs above individual needs. Many researchers and substance abuse prevention agencies have emphasized family cohesiveness and stability among Asian-Americans and Pacific Islanders (as evidenced by lower divorce rates, for example) as one of the most important deterrents to substance use as well as other antisocial and self-defeating behaviors. The family-oriented approach emphasized the importance of including family members in all prevention, intervention, and treatment programs. Prevention programs based on this

model may, therefore, monitor program success by periodically measuring clients' perception of family cohesiveness. One scale used for this purpose is the Student Attitudinal Inventory (Kim, 1981), which includes the Family Cohesiveness Scales as one of its subscales.

Information-Deficit Model

The essence of the information-deficit model is to treat the limited skills and competencies of AAPI groups and their adjustment problems—both social and family-related—as skills and information deficits, not as negative cultural factors or ethnic weaknesses. According to this model, a prevention agency is expected to present itself as an information provider and as a provider of opportunities to learn.

Many American-born Asians subscribe to a broader definition of the term "drug," that includes alcohol and cigarettes. Foreign-born Asians, on the other hand, are more likely to subscribe to a more restricted definition that excludes alcohol and cigarettes from the class of drugs. Zane and Sasao (1990) found this to be true of Japanese Americans. Thus, prevention programs based on the information-deficit model may well incorporate the broader definition of drug as one of their process measures (cell 5).

Many prevention strategies based on the information-deficit model not only attempt to increase clients' knowledge about drugs but also include education modules on alcoholism and drug addiction to lessen the stigma attached to seeking professional help among AAPI groups. Assuming the latter strategy is well received by the client pool, one of the clear indications of program success may well be an increase in the number of Asian-American and Pacific Islander clients seeking professional help for substance use and abuse over the project's duration (cell 5).

Empowerment Model

The empowerment model was originally developed for use in African American communities during the late 1960's and early 1970's. It is in part based on the alienation and hopelessness syndrome as a potential cause of substance abuse. The empowerment model emphasizes a movement away from "hand-downs" and

"handouts" (from the privileged to the deprived) to an indigenous grass-roots movement toward self-determination and self-sufficiency in a setting of cultural pluralism (Asian-American Community Mental Health Training Center, 1981; Blum, 1979).

Operationally, one criterion for the measurement of process outcome (cell 5) for this type of prevention program can be based on the degree to which the indigenous actors participate in the empowerment process, that is, the degree of organized movement by the indigenous toward self-determination and self-sufficiency. One potential process outcome variable can be measured by the Community Involvement Scale (Kim, 1990). For the community-based prevention programs based on this model, indicators of program success may include an increase in the number of people in the target population serving in decisionmaking positions in the governing body of that ethnic/racial group and an increase in the number of community-initiated projects launched (e.g., self-help groups, forums, supportive services organizations, task forces, special interest groups, fraternal or school associations, and sporting activities).

Cultural Enrichment Model

Programs based on the cultural enrichment model are implicitly or explicitly related to the major theoretical proposition advanced by the OCI theory (cell 1).

A major consideration in evaluating the success or failure of a prevention project based on this model should be its influence in shaping and enhancing culturally valued characteristics within the target group (e.g., respect for the elderly) and in promoting the practice of culturally unique ceremonial activities, community cultural fairs, and so forth (cell 5). Also, the cultural norms for acceptable and unacceptable drinking behavior within AAPI cultures are fairly clear. Accordingly, the evaluation team should draw attention to these norms in selecting appropriate dependent variables (cell 6) for the project.

Mutual Support Model

Much of the mutual support model is based on the cultural conflict approach described in cell 1 and the culture-specific risk factors mentioned in cell 2. The model is based on the notion of sharing information about life experiences—problems and solutions—in the process of adapting to a larger pluralistic society. Asian-Americans and Pacific Islanders may encounter problems related to cultural conflict, life adjustment, family conflict, child rearing, and the like. In recent years, many prevention and treatment professionals have realized the value of getting their clients together with others who share similar problems. Through mutual help and support, the participants in these self-help group meetings discover additional or alternative ways of coping with both normal and unusual crises in their lives. By talking with others about their difficulties and the ways in which they are trying to overcome them, participants find both comfort and enlightenment (Silverman, 1980). It is also believed that the sharing of similar kinds of problems in a setting that is mutually supportive instills a sense of normalcy and stability, rather than provoking crisis-oriented, hasty, or panic-driven reactions that may be disruptive to the family and the individual.

Some of the potential indicators of program success (cell 5) include membership changes and trends in these self-help groups, membership stability over time, and the degree to which the members feel a sense of group cohesion (Seashore, 1954).

Vocational Training Model

The vocational training model is founded on the assumption that young people who have no gainful employment or who are underemployed have little connection to the future, and that they fail to learn about the deferred gratification associated with hard work and perseverance. Thus, the intent of this model is to make clients more employable through vocational training, which can range from basic skills development (including literacy) to more technical areas such as occupational training. Gainful employment is equated not only with increased self-esteem but also with an enhanced feeling of purpose in life (cell 5).

Alternatives or Recreational Model

The alternatives or recreational model is based on the assumption that substance use and abuse are behaviors that develop in the absence of interesting or salient alternatives, and that providing such alternatives will effectively prevent substance abuse and other self-destructive or maladaptive behaviors. For example, it is often assumed that organized sports and recreational activities enhance discipline and teamwork and improve the self-esteem of participants (Barth, 1988; Richardson, Dwyer, & McGuigan, 1989). According to Richardson et al. (1989), participation in organized sports and other extracurricular activities has been directly linked to decreased use of alcohol and drugs. Accordingly, one may measure substance use and intentions, and attitudes toward substance use, as well as self-esteem, as potential dependent variables (cell 6). However, there is no conceptual link between this type of prevention model and other process evaluation variables that may be used to monitor the program other than simple frequency counts of events and people served (cell 5).

Cell 4: Recruitment and Retention

On the basis of the knowledge gained about the target population (cell 2), and depending on the particular prevention strategy adopted (cell 3), the critical question to be asked is, What kind of strategies are needed to recruit clients into the program in the first place and then how to retain these clients?

During the initial recruitment, understanding the AAPI groups (cell 2) will help us answer the following practical questions:

1. Do the clients prefer public or private settings for meetings and training?
2. Can the project recruit clients via regular mail, using approaches that have proven effective with White populations? Or can clients best be recruited through direct personal contact, including phone calls and visits made by friends?
3. Should we plan separate meetings and training sessions for groups based on ethnicity or country of origin, or can we have a mix of clients irrespective of their cultural backgrounds?

With regard to client retention strategies, the collaborative evaluation team also needs to assess the degree to which the prevention project will be able to provide logistical support to clients, for example, transportation, child care, and refreshments during meetings. To many Asian-American and Pacific Islander groups with an agrarian heritage (cell 2), the availability of food plays a very important role in enhancing the overall social atmosphere, and offering refreshments can increase the effectiveness of organized efforts to achieve a shared vision among program participants.

Cell 5: Evaluation Strategies and Methods

On the basis of contextual and theoretical information from cells 1 through 4, the collaborative evaluation team charts a strategy to collect data that address the overall mission of the project. The team's goal during this stage is to determine culturally relevant strategies for collecting the quality and quantity of data required. "Empowerment of the evaluation process," or active participation by the indigenous populations in all aspects of data collection, is crucial.

In designing evaluation strategies, the participatory or collaborative evaluation approach calls for a team composed of not only professional evaluators but also program facilitators, personnel from the funding agency, the administration staff of the program agency, and representatives from the target population.

With the knowledge gained about the target population (cell 2), the collaborative evaluation team is in a better position to answer a series of questions about the kind of evaluation strategies and methods to be employed (cell 5).

- Does the evaluation design require a control group? If not, what methods will be employed? Alternatives include the retrospective pretest design (Rhodes & Jason, 1987; Sullivan, Gulielmo, & Lilly, 1986), the "threshold-gating approach" to program evaluation (Kim, Crutchfied, Williams, & Hepler, 1994), and open systems evaluation (Cohen & Kibel, 1993).

- To what extent can or should the target population be involved in the data collection for both process and outcome evaluations? What are the cost-effective and feasible methods of collecting data from the target population? For example, what about ethnic associations, ethnic churches, or grocery stores as potential sites for data collection?
- What client feedback would clearly indicate that the program is working as intended?
- What client feedback would clearly indicate that the program is not working as intended?
- What kind of survey is most appropriate for the target population—mail survey, telephone survey, snowball survey, face-to-face interview, or the use of tape recorders or voice-activated recorders with bilingual prerecorded messages and questions?
- Should the survey be in English only, English and the native language, or the native language only?
- What method should be used if a translation of survey instruments is required? What alternatives to the Likert type of scale exist? (The Likert scale is not culturally appropriate for many Asian-American non-English-speaking cultures.) Would the use of graphic rating scales (Kim, McLeod, & Shantzis, 1990) be appropriate?
- How are people to be compensated for taking the time to respond to these surveys and to collect data for the project?

Cell 6: Outcome Analysis

Dependent Variables

To facilitate outcome analysis (cell 6), and especially to select appropriate dependent variables, the collaborative evaluation team needs to understand the theoretical underpinnings of the prevention project implemented.

Other things being equal, a hierarchical ranking should be assigned to each dependent variable on the basis of the relationship observed between that variable and substance use in the target population. Thus, the relative importance of each dependent variable will differ from one population to another. A review of

the literature in this field indicates that changes in substance use are the most convincing evidence of an intervention's efficacy. Other variables that may be listed hierarchically are problem behaviors that co-occur with substance use (Jessor & Jessor, 1977), intention to use substances (Fishbein, 1967), and other attitudinal dimensions found to be causally related to or closely associated with substance use in the target population.

Single-System Evaluation Designs

In evaluating community-based prevention programs, there will be few opportunities to use a control group design, not only because of the uniqueness of the population groups served but also because of financial and other logistical limitations. Accordingly, the determination of treatment effects in such situations should be based on single-system evaluation designs that do not involve control groups.

There are a number of single-system evaluation designs that can be used to evaluate the outcomes of prevention projects (Kim et al., 1994). Here we simply list the kind of designs that others have used in field settings. Interested readers are directed to the sources cited for more detailed information.

- Longitudinal time-series design (Babbie, 1992; Cook & Campbell, 1979).
- Individual growth curve modeling design (Anderson et al., 1980; Bryk, 1987; Bryk & Raudenbush, 1988; Bryk, Strenio, & Weisberg, 1980; Bryk & Weisberg, 1977; Kim et al., 1990; Kim, McLeod, Rader, & Johnson, 1992; Strenio, Weisberg, & Bryk, 1983).
- Within-experiment control design (Kim et al., 1994).
- Meta-analytic control design (Kim et al., 1992).
- Focus group evaluation design (Kim et al., 1994).
- One-third rule evaluation design (Kim et al., 1992).
- Multiple time-series control method (CSAP, 1992a, 1992b; Weiss, 1972).
- Retrospective pretest design (Rhodes & Jason, 1987; Sullivan et al., 1986).
- Nonequivalent control group design (McAlister, 1980).

Cell 7: Dissemination Strategies

Finally, the results of the evaluation must be disseminated in a manner that satisfies not only legislators, funders, and program administrators, but also the grassroots community that has benefited from or been empowered by the prevention project. Different kinds of evaluation reports can be tailored to different audiences. We propose three types of reports: (1) the executive report, directed to funders, administrators, and legislators; (2) the technical report, for professionals and for professional publication; and (3) the grassroots report, directed to the indigenous people in the target area.

In closing, we repeat that there is no simple or concise way to conduct a culturally competent program evaluation. Each of the seven cells identified in this chapter is a stepping stone toward a more culturally competent approach. This framework is not meant to be rigid; it seeks to bridge and integrate the other chapters assembled in this volume.

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3

The Development of Culturally Valid Measures for Assessing Prevention Impact in Asian-American Communities

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Editor's Note: *This chapter highlights the need to develop culturally competent, valid measures and instruments for assessing health status and intervention outcomes in Asian-American and Pacific Islander communities. This process requires much research and pilot testing across the diversity of AAPI groups.*

Instruments should be collected from the scientific literature, then documented for specific ethnic groups, ages, and generations of Asian-Americans and Pacific Islanders. The challenge is to provide the vehicle and resources for accomplishing this work most effectively. Ultimately, primary health care for Asian-Americans and Pacific Islanders will benefit enormously from the availability of short, valid assessment instruments. These instruments could be downloaded from Federal resource centers for a small fee and be made widely available on the World Wide Web. The hope is that, once these instruments are available, computers and language translation software will facilitate communication between health care professionals and their non-English-speaking clients.

Introduction

Within the past decade, there has been an accelerated development of ethnic-specific programs to respond to the needs of ethnic/racial communities in addressing problems of substance use and abuse (Bolek, Debro, & Trimble, 1992; Catalano, Hawkins, Krenz, Gillmore, Morrison, Wells, & Abbot, 1993; Collins, 1992; Orlandi, 1992; Trimble, Zane, Chavez, & Brose, 1991). Evaluations of these demonstration projects serve several critical functions. First, sensitive outcome evaluations can determine whether a program that is purportedly culturally responsive has the anticipated impact on risk behaviors and substance use in a particular ethnic community. Second, such evaluations can identify those salient aspects of the program that may make it especially effective with the targeted population. The evaluation can delineate program features that function in a culturally responsive manner. In this way, culturally competent evaluations systematically guide the development of more culturally responsive interventions by determining which of the culturally based aspects of the intervention are related to their success. Finally, specific strategies of the evaluation itself can be examined to better define operational parameters for culturally competent evaluation (Lynch & Hanson, 1992; Orlandi, Weston, & Epstein, 1992). This chapter focuses on the third area, specifically, the development of valid outcome measures within the context of culturally competent evaluation.

Given the great need for services in ethnic/racial communities, the majority of substance abuse prevention and treatment programs have emphasized cultural competence with respect to how services are accessed, implemented, delivered, and linked instead of how these services should be evaluated (e.g., Orlandi, 1992; Peña & Koss-Chioino, 1992). Culturally competent evaluation involves theoretically based design and assessment procedures that incorporate an understanding of ethnic and cultural variables that affect the behaviors and attitudes of specific ethnic/racial populations with regard to substance abuse. Numerous researchers have emphasized that culturally valid assessments and measures are critical for the appropriate evaluation of inter-

ventions targeted to ethnic/racial groups (Beauvais & Trimble, 1992; Grace, 1992; Hui & Triandis, 1985; Lawrence, 1993; Oetting & Beauvais, 1990–91; Sue & Sue, 1987; Yen, 1992; Zane & Sasao, 1992). It is often assumed that outcome measures developed for and normed on predominantly White majority populations have some relevance and utility for assessing ethnic/racial groups. However, very few evaluations or research programs have empirically tested the applicability of these assessment instruments for culturally diverse populations. There are an increasing number of strategies and approaches for conducting culturally competent program evaluation (see Beauvais, 1992; Beauvais & Trimble, 1992; Casas, 1992; Collins, 1992; Kalichman, Kelley, Hunter, Murphy, & Tyler, 1993; Kim, McLeod, & Shantzis, 1992; Marin, 1993; Peña & Koss-Chioino, 1992; Reyes, 1993; Schinke, Gordon, & Weston, 1990; Trimble, 1990–91; Yen, 1992; Zane & Huh-Kim, 1994). On the other hand, there are few parallel, empirically based efforts to develop culturally sensitive measures that can withstand the standard tests of construct validity (Lawrence, 1993; Moncher, Holden, & Trimble, 1990; Zimmerman & Maton, 1992).

The potential value in developing and using culturally appropriate measures cannot be overstated. Researchers have often noted, particularly those within the arena of psychological and cognitive assessment, that many of the measures used in evaluation designs may be inappropriate or invalid for some ethnic/racial groups (Jones & Thorne, 1987; Sue & Sue, 1987; Westermeyer, 1987). Translation and concept equivalence problems, differential salience of particular constructs measured, differential responsiveness to the assessment procedures and formats used, and differences in the adaptive function of certain behaviors have been identified as some of the culture-based factors that can contribute to inaccurate assessments (Hui & Triandis, 1985; Manning & Tuguz, 1992; Marin, 1993). Moreover, the lack of culturally appropriate instrumentation may cause inconsistent findings about the efficacy and effectiveness of certain prevention programs with an ethnic-racial focus. These assessment problems require empirical efforts and methodologies that extend beyond the translation of mainstream instruments to address issues of

risk, abuse, and adaptive functioning within the specific social and cultural matrix of a particular ethnic/racial population or community (Marin, 1993).

The development of culturally appropriate and valid measures of risk and substance use behaviors is especially problematic for Asian-American and Pacific Islander communities because they have seldom been the focus of drug prevention or evaluation research. Zane and Sasao (1992) have identified the major measurement problems that have hampered substance use and prevention research for AAPIs. First, the assessment of substance use attitudes, patterns, and risk behaviors typically relies heavily on self-report measures. Establishing the conceptual and functional equivalence of self-report items becomes especially difficult. Words, phrases, concepts, or scale formats may be too difficult to understand, too general, or lacking contextual references and may thus be interpreted differently by Asian-Americans, particularly those whose primary language is not English. For example, many Asian languages place greater emphasis on context in describing intrapersonal and interpersonal characteristics and behaviors. Less acculturated Asian-Americans and Pacific Islanders, particularly those who are more comfortable using their native language, may experience difficulty in rating themselves in response to general statements of attitude, actions, and ability that have little context (e.g., "I have difficulty making decisions"). These difficulties may, in turn, result in inaccurate self-reports of certain attitudes, behaviors, and personal capabilities.

Another issue is the shame and stigma associated with reporting substance use and risk behaviors. Public disclosure of excessive risk behaviors or substantial drug use can elicit great shame and loss of face for many Asian-Americans (particularly if the individuals are seeking treatment for these problems or feel that they have not fulfilled their obligation to the family or community because of these problems). Because of the often public nature of self-reports of submitting substance use and risk behavior in Asian communities (e.g., the presence of bilingual interpreters may be required), respondents may be less willing to disclose the extent to which they use substances, engage in risk

behaviors, or approve of alcohol or drug use for certain problems. Issues such as shame and losing face highlight the need to carefully consider the social context in which the measure is administered as well as the characteristics of the test administrator and the specific tasks required to respond to the measure's items.

Third, culturally appropriate and valid measures must address the great variation and diversity among the various AAPI populations. Asian-Americans and Pacific Islanders include more than 30 separate groups, each with its own cultural values, norms, immigration history, sociodemographic characteristics, and so forth. For example, much of the research suggests that rates of substance use are lower among AAPIs than among non-Asians (Maddahian, Newcomb, & Bentler, 1985; McCarthy, Newcomb, Maddahian, & Skager, 1986; Sue & Morishima, 1982; Sue, Zane, & Ito, 1979; Trimble, Padilla, & Bell, 1987) and that Asian-Americans and Pacific Islanders are less at risk for substance use (Newcomb, Maddahian, Skager, & Bentler, 1987). However, when studies have disaggregated the general AAPI population, varying rates and patterns of use or abuse have emerged among different groups, and at times these rates have been similar to or higher than those of non-Asian populations (Chi, Luben, & Kitano, 1989; Kitano & Chi, 1985; McLaughlin, Raymond, Murakami, & Gilbert , 1987; Wong, 1985; Yee & Thu, 1987).

Finally, previous studies have often failed to address important individual differences within a particular AAPI population. Individual differences in terms of English proficiency, acculturation, cultural identification, socioeconomic status, and other demographic characteristics have been found to be important correlates or predictors of risk behaviors and substance use (Oetting & Beauvais, 1990–91; Zane & Sasao, 1992). The development of valid measures of acculturation and cultural identity is critical because these variables constitute some of the more important aspects of individual differences within Asian-American and Pacific Islander groups (Zane & Huh-Kim, 1994). Oetting and Beauvais (1990–91) have proposed an orthogonal model of cultural identity in which the extent of peoples' identification with their ethnic culture is independent of their identification with the majority culture. This perspective allows for the examination of ethnic

identification (or acculturation) along multiple cultural dimensions. The orthogonal approach also raises the possibility that earlier research may oversimplify the effects of acculturation and ethnic identity. Measures used in earlier studies tended to follow the traditional bipolar, assimilation-oriented model of cultural identity that assumed that people identified more with the majority culture and less with their ethnic culture. It is possible that research based on the orthogonal model can better capture different patterns of cultural adaptation especially as they relate to substance use and abuse among Asian-Americans and Pacific Islanders.

The need to develop and implement culturally sensitive services for AAPIs is confined, in part, by our lack of understanding of substance use among these populations. Research on substance use patterns among Asian-Americans and Pacific Islanders has increased steadily over the past 15 years, but inconsistent and methodologically suspect findings have limited our understanding of substance use issues in these populations (Zane & Huh-Kim, 1994). The development of culturally appropriate measures not only facilitates effective and sensitive evaluations of ethnic-specific programs, but such efforts also assist in the implementation of sound parametric substance use research. These efforts may improve the articulation of service needs and resulting interventions for different AAPI communities. This chapter presents evaluation research that addresses these concerns. The study described below empirically tested the construct validity and reliability of instruments developed to measure substance use, attitudes related to use, risk behaviors, acculturation, family relations, and psychosocial adjustment among youths and their parents from two major AAPI populations (Chinese and Filipino). Recommendations for the development of culturally competent evaluation and assessment are also discussed.

Method

Prevention Setting and Participants

Measures were developed for the evaluation of an ethnic-specific prevention program for youth at high risk in Asian-American communities in San Francisco. The purpose of the Asian Youth Sub-

stance Abuse Project (AYSAP, 1993) was to demonstrate how different Asian ethnic groups could use a consortium of community-based agencies to develop a multilevel, comprehensive program for the prevention of alcohol and drug use among high-risk youths. AYSAP served five Asian ethnic groups (Chinese, Filipino, Japanese, Korean, and Vietnamese) whose respective communities differed in immigration history, socioeconomic level, spoken language of preference, level of community development, nativity status (foreign-born versus U.S.-born), and so forth. The prevention programs designed by each community agency reflected this diversity. AYSAP recognized that no single prevention strategy could accommodate the complexities of an urban setting, cultural and language variations, and the multiple factors associated with drug use among youth. AYSAP developed a set of coordinated prevention activities that drew from a number of empirically validated prevention approaches including social competency, community empowerment, and life skills development. The program's interventions were targeted at four levels: individuals, families, communities, and institutional systems.

At the individual level the goal was to promote positive personal and social development by strengthening specific life skills (e.g., conflict management, social skills). The interventions included a cultural identity and alternative activities program, life skills development workshops, a youth leadership and empowerment program, and bicultural counseling services. At the family level, the goal was to support cultural strengths within Asian families and to promote effective parenting skills, especially in the management of intergenerational conflicts. Specific interventions included parent-teen communication and support workshops, parenting workshops, parent support groups, and culturally and linguistically responsive family counseling services. Interventions targeted at the community level sought to increase the involvement of Asian community members and institutions in promoting nonuse messages and activities while supporting the needs of Asian families at risk. Specific program activities included collaboration with other Asian community-based agencies in conducting drug-free recreational activities and community forums and developing of advocacy and self-help groups. AYSAP also conducted interventions to change service systems.

The goal was to increase the availability and accessibility of institutional services affecting Asian youths at high risk for substance use and their families. Program activities included training for human and social service providers designed to enhance their responsiveness to the needs of Asian-American communities as well as collaboration with human service systems to provide ethnic-specific services for high-risk Asian youths and their families. (For example, the program worked with the San Francisco Unified School District to develop an alternative high school program for Chinese youth at high risk.) The prevention approaches varied to accommodate the needs of the particular Asian group targeted, but most interventions incorporated certain features to enhance their cultural responsiveness: institutionalized mechanisms to provide community input about program development (e.g., consortium advisory committees, community focus groups), bilingual and bicultural staff, coordination of activities between community agencies and mainstream services, and curriculums that emphasized values and issues salient to Asian-Americans (e.g., loss of face, family values, shame, immigrant stress, identity conflicts, intergenerational conflicts).

Development of Culturally Appropriate Measures

Most of the evaluation measures had not been validated on Asian-Americans, particularly Asian youths. Program staff and the evaluators collaborated to conduct extensive pilot testing to determine whether the measures selected were applicable to the various Asian-American populations involved in AYSAP's prevention activities. Depending on the particular measure, items, scale formats, and instructional sets were revised to make the measures more comprehensible and appropriate for the bicultural Asian youths, their predominantly immigrant parents, and community members. Whenever possible, the original measures were retained to optimize comparability with previous substance abuse evaluations. In only a few cases, the selected measure was replaced with an alternative instrument when pilot testing indicated that the original measure was not assessing behaviors or attitudes associated with adaptive or poor

functioning in Asian-American communities (e.g., the Family Environment Scale was replaced by the Family Relations Scale, whose items appeared to better capture normative, adaptive behaviors in Asian-American families).

Several strategies were used in the selection and development of the measures. Using consultations with experts on Asian-American assessment along with youth focus groups, key informant interviews, and staff interviews, the evaluators reviewed measures that demonstrated adequate psychometric properties with youth populations. Each group of consultants was asked to review the following features of each measure: instructional set; item content; item format; item familiarity; item suitability for translation; risk or adaptive function of the behavior or attitude given the cultural or community context; cultural relevance of the behavior or attitude to the targeted construct (e.g., behaviors that are typical of parental support in Asian families); and cultural factors (e.g., shame) that may affect a person's response to the items. The measures that were eventually selected tended to be ones that had been used with other ethnic/racial youth and had demonstrated good psychometric properties. If two or more groups of consultants identified problems with a particular measure, the troublesome aspects of the measure were revised. In a few cases, the existing measure was found to be inadequate or inappropriate for assessing the construct of interest and was replaced with a newly developed measure. After 1 year of pilot testing, the measures were examined for internal consistency and concurrent validity. On the basis of the psychometric results and a second round of consultations, the measures were revised as needed. The measurement modifications tended to involve format changes to decrease item ambiguity; content changes to increase applicability to urban, immigrant populations; and the removal of jargon to increase comprehension. With respect to format changes, many personality-oriented items with a true-false format presented problems for immigrant adults and some youths. The typical item stem usually included a conditional clause such as "at times," "usually," or "often" so that respondents could answer true or false without feeling that the statement was an absolute

judgment. This format was confusing for Asian youth and parents, who often asked about the actual frequency to which "at times" referred. To decrease ambiguity, the conditional clauses were removed and replaced with direct descriptive statements (e.g., "I doubt my abilities"), and the true-false response format was replaced with a Likert frequency scale.

A total of 27 measures were used in the AYSAP program to assess outcomes in the five ethnic-specific prevention components. These measures assessed issues including substance use, knowledge about drugs and their effects, high-risk behaviors, acculturation, cultural identification, family support, parenting style, and specific life skills (e.g., problem-solving, goal-directedness).[1] Different sets of measures were developed for specific types of intervention programs such as counseling services or alternative recreational activities. Consistent with the ethnic-specific focus of AYSAP, different Asian youth groups received different types of interventions. Consequently, specific sets of measures were developed for the groups involved in a particular intervention. The measures reported in this study were those selected for the evaluation of the prevention counseling program developed for Chinese and Filipino youth, and they are a subset of the 27 outcome measures used across the 10 prevention programs implemented as part of AYSAP.

Counseling Outcome Measures

The measures described below assessed change in major areas of functioning: psychological maladjustment, self-esteem, interpersonal distress, family relations, substance use, and risk behaviors. A measure of acculturation level was also administered to examine important individual differences among Asian youths and their parents. All measures were completed by the participants with the exception of the Brief Psychiatric Rating Scale (BPRS) (Overall and Gorham, 1962), which was completed by the AYSAP counselors.

Psychological Maladjustment

The BPRS assesses 18 symptom areas: somatic concern, anxiety, guilt, suspiciousness, grandiosity, hostility, depressive mood,

hallucinatory behavior, emotional withdrawal, conceptual disorganization, tension, mannerisms and posturing, motor retardation, uncooperativeness, unusual thought content, excitement, disorientation, and blunted affect. Counselors rated participants on the severity of each symptom on a 7-point Likert scale ranging from "not present" to "extremely severe." The counselors were trained for a minimum of 2 hours on the use of the measure. The measure can be used with a wide range of clinical and subclinical populations. Numerous validation studies including cross-cultural investigations (Hedlund & Vieweg, 1980; Overall & Hollister, 1982) using contrasting groups, concurrent-measures approaches, and factor analysis have supported the reliability, validity, and effectiveness of the BPRS. This measure has been successfully used with Asian clients seeking outpatient services (Zane, Enomoto, & Chun, 1994).

Self-Esteem

The self-esteem measure was adapted from the self-esteem subscale of the Life Skills Training Student Questionnaire developed by Botvin, Baker, Resnick, Filazzola, and Buthen (1984). The 13-item measure assesses aspects of self-esteem including self-confidence, self-satisfaction, and autonomy. Respondents indicate the extent to which they agree with each self-descriptive statement on a 5-point Likert scale ranging from "almost never" to "almost always." The original measure demonstrated adequate reliability and validity for predominantly White-American adolescent samples (Botvin et al., 1984).

Interpersonal Distress

This subscale of the Omnibus Personality Inventory (OPI) (Heist & Yonge, 1968) is a 23-item, true-false measure that assesses the quality of one's interpersonal relationships. Numerous reliability and validity studies have documented the sound psychometric properties of the OPI and its subscales The Interpersonal Distress subscale had been used in previous mental health research with Asian-American youth (Abe & Zane, 1990; Sue & Zane, 1985).

Family Relations

Originally, the Moos Family Environment Scale (FES) (Moos & Moos, 1981) was selected to assess changes in family relations. However, the pilot study indicated that FES contained a number of subscales that did not appear to be appropriate for assessing Asian family relations. For example, the Expressiveness scale assesses the extent to which family members openly express their feelings where more openness is seen as adaptive. There was a strong consensus among the consultants, community key informants, and youth focus groups that this type of emotional expressiveness was not necessarily normative or adaptive for many immigrant Asian families. There were similar problems with other FES subscales. FES was replaced by a modified version of a family relations measure that had been field tested with Asian families (Song, 1986). Factor analysis of the Family Relations Scale uncovered two factors (accounting for 34 percent and 20 percent of the variance, respectively) reflecting family support (e.g., "My family members ask each other for help" and "My family members feel very close to each other") and family discord (e.g., "We fight in my family" and "My family members criticize each other").

Substance Use

The Substance Use Inventory (SUI) is a modification of a widely used self-report measure of substance use (Skager, Fisher, & Maddahian, 1986) that was specifically designed to assess drug use patterns among adolescents. The inventory measures use of alcohol, nicotine, cocaine, heroin, marijuana, barbiturates, amphetamines, and other substances. Respondents indicate the frequency with which they use a particular drug within the past month, from "none" to "more than once a day." The SUI has been used successfully in another evaluation project for Asian-American substance abuse prevention programs (Sasao, 1991). In that study, meaningful variance was found only for the drinking and smoking items, and only these types of substance use were reported in the results.

Risk Behaviors

The High Risk Behaviors Inventory consists of items selected from Jessor and Jessor's (1977) Attitude Towards Deviance Scale and Swisher, Shute, and Bribeau's (1984) Primary Prevention Awareness, Attitude, and Usage Scale. The items chosen from these two measures referred to risk behaviors that had been identified by both the prevention staff and the community focus groups as characteristic of Asian youths who use drugs. High-risk behaviors such as fighting, cheating, having drugs offered by peers, and skipping classes were assessed. Respondents indicated the frequency with which they had engaged in or been exposed to each high-risk behavior during the previous month on a 6-point Likert scale ranging from "zero times" to "20 or more times." The two risk measures were administered only to the youth.

Acculturation Scale

The acculturation measure was adapted from the Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA), which measures a person's general level of acculturation to American culture (Suinn, Rickard-Figueroa, Lew, & Vigil, 1987). The original scale consists of 20 multiple-choice items that measure language, identity, friendship, behaviors, generation and geographic history, and attitudes toward Asian and White-American cultures. The scale demonstrates good reliability, internal consistency, and validity (Suinn et al., 1987). Pilot testing indicated that many of the SL-ASIA items were not good discriminators of acculturation levels among the Asian-American participants in AYSAP. This is not surprising, since the cultural diversity of the San Francisco population provides people with an array of multicultural experiences that may not adhere to the bicultural model upon which most acculturation measures, such as the SL-ASIA, are based (i.e., it is assumed that acculturation involves contact primarily between two cultures). Consequently, a shortened version of the SL-ASIA was used that focused on social affiliation (three items), contact with one's East Asian country of origin (two items), language preference (one item), and ethnic identity (two items).

Results

Reliability

Table 3.1 presents the reliability (internal consistency) coefficients for both youth and parent samples. The reliabilities ranged in Cronbach's alphas from .69 to .91. The reliabilities for the youth measures are somewhat higher than those for the parent measures, particularly in the assessment of family relations. It appears that most of the measures are internally consistent. Moreover, the measures are sufficiently reliable, which should minimize problems in interpreting the subsequent correlations used to examine the concurrent validity of these measures.

Table 3.1. Reliability coefficients of posttest outcome measures for counseling programs

Outcome Measure	Youth	Parent	No. Items
BPRS	.82	.82	18
Acculturation	.81	.72	7
Self-esteem	.75	.76	13
Family support	.91	.87	15
Family discord	.83	.69	5
Interpersonal distress	.90	.91	22
Personal risk[a]	.75	—	10
Peer risk[b]	.88	—	4

Note. Coefficients are expressed as Cronbach's alpha values. Filipino and Chinese samples are combined. BPRS = Brief Psychiatric Rating Scale.

[a]Antisocial acts related to maladaptive behavior (e.g., beating up another kid, stealing something from another person); contains six additional items related to conduct in school.

[b]Peer pressure to use drugs.

Validity

Most of the measures, with the exception of the acculturation and substance use indices, assess some aspect of psychosocial functioning. Of these, two measures—psychological maladjustment and self-esteem—refer to more global appraisals of a person's adaptive status; the former reflects maladaptive behavioral patterns and symptoms, and the latter reflects more resiliency tendencies and personal resources. Given their global reference bases,

we would expect both measures to be associated with a range of more specific psychosocial indicators but in the opposite directions. Three measures—interpersonal distress, family support, and family discord—focus on the quality of a person's relationships, so these measures should be associated more with each other and less with other aspects of functioning. Because acculturation has been found to be one of the most sensitive individual difference measures among Asian-Americans (Sue & Morishima, 1982; Zane & Huh-Kim, 1994), we would expect this measure to be associated with a broad array of variables including psychosocial functioning, substance use, and risk behaviors. Finally, most of the measures were selected because previous research had identified these as important predictors of substance use and other health-related behaviors among Asian-Americans (Zane & Sasao, 1992). Thus, we would expect most of these measures to be associated with the measures of alcohol use and nicotine use, especially those involving risk behaviors (personal risk and peer risk).

Youth Measures

The intercorrelations among the youth measures are presented in the top half of table 3.2. As predicted, the global measure of psychological maladjustment was significantly related to a wide range of psychosocial functioning and to alcohol abuse, and its correlations with personal and peer risk approached significance. As predicted from previous research (e.g., Smith, 1985), individuals with greater maladjustment also reported more substance abuse and more frequent personal and peer risk behaviors. However, the other global outcome measure, self-esteem, was only related to two indices of interpersonal functioning, and it was not related to acculturation, risk behaviors, or substance abuse. Except for self-esteem and interpersonal distress, acculturation was significantly related to (or approached significance with) every other variable, including the risk behavior and substance use indices, and these relationships were in the expected directions as predicted by previous research on Asian-Americans (Uba, 1993). For example, those who were more acculturated reported more substance abuse and more frequent engagement in risk behaviors. As predicted, the three measures that focused on the

quality of an individual's interpersonal relationships were most highly correlated with each other. With the exception of their correlations with self-esteem, interpersonal distress and family support correlated most highly with each other and with family discord. Similarly, family discord correlated most highly with family support and interpersonal distress. Family discord also was significantly related to substance abuse and risk behaviors, whereas interpersonal distress and family support tended to be domain-specific in that their only significant correlations were with other interpersonally oriented measures and self-esteem. With respect to the risk measures, peer risk correlated most highly with personal risk and with both nicotine and alcohol abuse, and it tended to be a better correlate of substance abuse than the psychosocial indicators or acculturation. Personal risk correlated with alcohol abuse at a level similar to that found for acculturation and the psychosocial indicators, and it was not significantly related to nicotine use. Consistent with the earlier research (e.g., Newcomb et al., 1987), personal and peer risk were also significantly associated with many indices of psychosocial functioning.

In sum, it appears that with the possible exception of self-esteem, most of the outcome variables used in the evaluation of functioning and substance abuse among Filipino and Chinese youth demonstrated concurrent validity. Moreover, most of the outcome indices were significantly related to substance abuse and risk behaviors. Only family support, interpersonal distress, and self-esteem showed nonsignificant correlations with the substance use-related variables. It also appeared that peer risk was a better predictor of substance use than was personal risk.

Parent Measures

The bottom half of table 3.2 presents the intercorrelations among the outcome measures for the parent sample. Neither of the measures that assess global psychosocial functioning showed the expected pattern of correlations across other more specific measures of psychosocial functioning. Psychological maladjustment was related only to acculturation and family support, whereas self-esteem was related only to family support. Neither was related to substance use, although psychological maladjustment's

Table 3.2. Intercorrelations of posttest outcome measures for counseling programs

BPRS	Accul	Esteem	Support	Discord	Distress	Nicotine	Alcohol	Pers Risk	Peer Risk
Youth									
Brief Psychiatric Rating Scale (BPRS)									
Acculturation (Accul)	.31**								
Self-esteem (Esteem)	−.13	.12							
Family support (Support)	−.06	−.20+	.54***						
Family discord (Discord)	.25*	.31**	−.13	−.43***					
Interpersonal distress (Distress)	.17	−.02	−.55***	−.52***	.51***				
Nicotine use (Nicotine)	.11	.37***	.09	−.12	.39***	.07			
Alcohol use (Alcohol)	.30**	.21+	.03	.02	.29*	.15	.44***		
Personal risk (Pers Risk)	.20+	.28*	−.09	−.07	.29**	.25*	.19	.28*	
Peer risk (Peer Risk)	.21+	.29**	.04	.03	.26*	.23	.39***	.51***	.48***
Parent									
Brief Psychiatric Rating Scale (BPRS)									
Acculturation (Accul)	.34*								
Self-esteem (Esteem)	−.21	.30+							
Family support (Support)	−.45**	−.35*	.46**						
Family discord (Discord)	−.06	.23	−.05	−.22					
Interpersonal distress (Distress)	−.10	−.04	−.10	−.02	.39*				
Nicotine use (Nicotine)	−.02	.08	.05	.22	.32+	.16			
Alcohol use (Alcohol)	−.30+	−.08	.08	.15	−.18	.08	.03		

Note. Filipino and Chinese samples are combined.

+$p<.10$; *$p<.05$; **$p<.01$; ***$p<.001$.

relationship with alcohol use approached significance. The only other significant association found involved family discord, which correlated significantly with interpersonal distress, and its correlation with nicotine use approached significance. The convergent associations expected among the interpersonally oriented measures (i.e., family support, family discord, and interpersonal distress) were not found to the extent that they were found in the youth sample. Family discord correlated significantly with interpersonal distress, but this was the only significant relationship among these three variables. Contrary to our predictions, acculturation was not associated with a wide range of outcome variables or indices of substance use. Only one outcome measure correlated significantly with substance use: Parents who reported more conflict in their families smoked more. Psychological maladjustment approached significance in its relationship with alcohol use, but the relationship was in the direction contrary to what has been found in previous research: Those who experienced more maladjustment drank *less.*

The outcome measures used with Asian-American parents did not demonstrate as strong convergent validity relationships as strong as those found for the youth sample. Most of the measures were not correlated with other measures to the extent predicted by their underlying constructs or by the previous literature. For example, the interpersonally oriented measures did not have strong correlations with each other. Also, the self-esteem and psychological maladjustment measures did not show strong associations across specific areas of functioning as predicted by their global nature. Moreover, few measures correlated with substance use. The acculturation measure demonstrated moderate validity relationships, as it correlated with family support and psychological maladjustment and approached significance in its association with self-esteem. However, it was not associated with substance abuse as it was in the youth sample.

Sensitivity to Inter-Asian Variation

A major problem that limits empirical studies of substance abuse issues in Asian-American communities is the lack of attention paid to the great heterogeneity among various Asian-American

groups (Zane & Sasao, 1992). Quite often Asian-American groups may differ on important sociodemographic and psychosocial variables that are assessed in program evaluations. When such differences are expected or predicted, evaluation outcome measures must reflect this variation. Studies have consistently found differences between Filipino and Chinese populations on a number of social indicators and psychosocial variables, including immigration history, acculturation, socioeconomic status, health and mental health status, and substance use (e.g., Kitano, 1991; Kitano & Daniels, 1988). Similarly, health officials in San Francisco have noted that these two Asian populations are quite different with respect to substance abuse issues and health service needs (P. Jamero, personal communication, 1994). Thus, another criterion of cultural validity is whether the measures are sensitive to these inter-Asian group variations.

To test for overall differences between Filipino and Chinese youth prior to the intervention, a multivariate analysis of variance (MANOVA) was conducted on all the youth outcome measures at pretest. Important differences were found between the two groups, $F(20, 57) = 4.7$, $p < .001$. Table 3.3 presents a summary of the univariate comparisons between the Chinese and Filipino groups on the outcome measures for both parent and youth samples. The univariate comparisons indicate that Filipino youths differed significantly from their Chinese counterparts on all measures except self-esteem and family support. Filipino youths reported more psychological maladjustment, greater acculturation to American culture, more family discord, greater interpersonal distress, and greater frequency of personal and peer risk behaviors. An overall ethnic group effect was also found for the parent measures, $F(16, 18) = 4.6$, $p < .01$. The differences between Filipino and Chinese parents were not as numerous as those found for the youth. However, the group variations that were found tended to parallel the youth results. Filipino parents reported more psychological maladjustment, greater acculturation, and higher self-esteem. They also reported more family discord, which approached significance. It appears that both sets of measures were sensitive to important group variations between the

Filipino and Chinese samples, and these differences were especially evident in the youth measures.

Table 3.3. Ethnic group comparisons of pretest measures for youth and parent counseling programs

	Filipino		Chinese		
	Mean	Standard Deviation	Mean	Standard Deviation	*t*(76)
Youth					
BPRS	1.96	.63	1.34	.30	5.08***
Acculturation	3.00	.78	2.29	.92	3.65***
Self-esteem	3.00	.41	3.10	.46	−1.07
Family support	2.70	.70	2.97	.75	−1.61
Family discord	2.51	.91	1.96	.64	2.95**
Interpersonal distress	2.62	.54	2.35	.52	2.19*
Personal risk	1.62	.58	1.15	.23	4.30***
Peer risk	1.80	.94	1.02	.06	4.62***
Nicotine use	2.34	1.62	1.12	.43	4.07***
Alcohol use	1.49	.69	1.19	.40	2.16*
Parent					
BPRS	1.77	.25	1.27	.22	6.17***
Acculturation	2.31	.46	1.84	.63	2.44*
Self-esteem	3.61	.39	3.22	.41	2.80**
Family support	3.31	.48	3.31	.79	−.03
Family discord	2.23	.54	1.86	.57	1.93+
Interpersonal distress	2.10	.69	2.24	.47	−.72
Nicotine use	1.60	1.40	1.20	.89	1.03
Alcohol use	1.13	.35	1.40	.75	−1.27

Note. BPRS = Brief Psychiatric Rating Scale.

+$p<.10$; *$p<.05$; **$p<.01$; ***$p<.001$.

Discussion

There is widespread argument about the need to develop program evaluation outcome measures that are valid for different ethnic/racial groups, but few empirical programs have been devoted to systematically developing and validating such instruments. This chapter presented one effort to develop culturally

valid measures for Asian-American populations. Three criteria were used to assess the adequacy of the measures for evaluating prevention impact on Asian-American populations. First, the measures had to be reliable with respect to internal consistency. Second, they had to demonstrate concurrent validity in terms of their correlations with other related measures in the directions as predicted by previous substance abuse and prevention research. Finally, the measures had to be sensitive to differences among specific Asian-American groups. The last criterion was especially important in view of the great heterogeneity observed among different Asian groups with respect to psychosocial variables.

In general, the evaluation measures developed and selected for the Chinese and Filipino populations appear to have adequate reliability, concurrent validity, and intergroup sensitivity when the measures are used with youth (ages 12 to 18). The self-esteem measure was the only one that showed poor concurrent validity, and it was not sensitive to differences between the two Asian groups. The acculturation measure performed well as the core individual difference measure in that it was correlated with most other indices and in the directions predicted by previous research. The family relations measures—family support and family discord—were of particular interest because other family relations measures (e.g., the Moos Family Environment Scale) had not performed well when used with Asian-American groups (1993). Moreover, researchers have noted that the greater emphasis on collectivism in Asian-American cultures situates the family unit and its relationships as critical determinants of psychosocial functioning for Asian-American individuals (Shon & Ja, 1982). The family support and family discord measures were developed specifically to assess relationships in Asian-American families. When used with the youth samples, the measures were reliable, showed convergent relationships with related measures (e.g., interpersonal distress), and reflected differences between Filipino and Chinese samples as predicted by earlier studies. The results strongly suggest that these measures are valid indices of Asian family relations. The family discord measure may be especially useful because it was also significantly correlated with risk behaviors and substance use.

Measures significantly associated with alcohol or nicotine abuse included psychological maladjustment, acculturation, family discord, personal risk, and peer risk. Peer risk had some of the highest correlations with both nicotine and alcohol abuse, and this type of risk was a stronger correlate of drug use than was personal risk. This pattern of relationships is consistent with the research on peer influences (e.g., Oetting & Beauvais, 1987) in which peer influences have been found to be better predictors of drug use than were personal risk behaviors (e.g., truancy, school adjustment).

The measures appeared to be less adequate for assessing functioning in Asian-American adults. Although the parent measures were internally consistent and sensitive to inter-Asian group differences, in general the concurrent validity correlations were weaker or nonexistent. The measures that demonstrated the most adequate validity coefficients were the family support variables and psychological maladjustment. It is possible that the difference in results between the youth and parent samples simply reflected differences in language proficiency. However, several conditions suggest that language proficiency was not the major differentiating factor. First, many Chinese youths were not proficient in language, so bilingual measures were used for both the youth and parent Chinese samples. Second, all of the Filipino parents were proficient in English so bilingual measures were not used with either the youth or parent Filipino samples. Finally, when necessary, each measure was translated and back-translated to establish conceptual equivalence between the English and non-English versions.

A more likely explanation for the lower validity coefficients is that the parent validity study lacked sufficient power. Assuming an effect size of .30, the parent study with its sample of 35 had somewhat low power of .45. In contrast, with a sample size of 78, the youth study had moderately high power of .78. On the other hand, cultural factors may be implicated. A high proportion of the parents were immigrants, while most of the Asian youth were American-born. Except for the family relations scales and the acculturation measure, the measures were originally developed for non-Asian, American-born populations. Thus, the pos-

sibility still exists that the measures may be better suited for assessing more acculturated samples.

The results of this validation study must be interpreted within the obvious constraints of the samples in terms of the specific Asian groups selected (Filipino and Chinese), the problem behaviors targeted for intervention (risk behaviors for substance use and abuse), and the particular community and geographic region sampled. Even with these limitations, several tentative conclusions can be drawn about empirical efforts to develop culturally valid instrumentation. It appears that the position taken by cultural relativists advocating the development of cultural-specific measures is not always warranted. Certain psychosocial measures originally developed for non-Asian populations were valid, particularly when used with Asian youth. On the other hand, the position taken by mainstream proponents promoting the use of Western-based instruments with minor modifications to accommodate cultural differences is also not wholly supported by the results of this study. Certain measures developed for non-Asian populations, in particular those that focused on family relations, were inappropriate for assessing Asian youth and parents. Moreover, the cultural-specific measures of these constructs demonstrated sound psychometric properties, were sensitive to inter-Asian group differences, and evinced significant associations with the targeted behavioral domain, namely, the risk behaviors and substance abuse of Asian youths. It appears that the relative appropriateness of a culture-specific and mainstream approach depends on the particular construct assessed and the specific ethnic population sampled.

Future studies should investigate the cultural parameters that would make a measure more or less appropriate for a particular cultural group. One parameter may involve the degree to which the phenomenon or construct may be affected by value differences between cultures. In the present study, a culture-specific approach to assessing family relations was needed because it appeared that a major value difference between American and Asian cultures—an individualist versus a collectivistic orientation—was reflected in the way family members relate to each other. Regardless of the approach, it appears that certain format

changes to items and responses are needed to provide more contextual information to Asian-American respondents. Lynch and Hanson (1992) noted that one of the major communication differences among cultures involves the extent to which people use context in their languages. East Asian languages tend to have more context than English. Response formats and item stems should be changed so that the context is adequate to provide a meaningful inquiry for Asian-American respondents.

The outcomes of this study strongly suggest that efforts to develop more appropriate measures for ethnic/racial groups not only are needed but can be quite productive. A key step in such efforts is to move past the nonfunctional debate over cultural relativity to the more practical and empirically grounded questions of how the measure performs psychometrically and how it captures important individual variations in a particular cultural group. Subsequent, more sophisticated efforts in this area can only enrich the nomological net of constructs relevant to the study and evaluation of interventions to prevent substance abuse in culturally diverse communities.

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Endnote

1. The following measures were used in AYSAP: Acculturation Scale; Assertiveness Scale; Attitudes Toward Drugs Scale; Brief Psychiatric Rating Scale; Knowledge Test—Substance Abuse; Knowledge Test—Client Assessment; Knowledge Test—Treatment and Phases of Recovery; Knowledge Test—Asian-American Issues in Substance Abuse; Client Satisfaction Form; Community Opinion Survey; Community Services Awareness Form; Cultural Identity Measure; Family Relations Scale I; Family Relations Scale II; Global Assessment Scale; Goal-Setting Scale; High-Risk Behaviors Inventory (two versions); Interpersonal Distress Scale (youth and parent versions); Problem-Solving Skills Scale; Self-Efficacy Scale; Self-Esteem Scale (youth version; long and short form); Self-Esteem Scale (parent version); Substance Abuse Knowledge Inventory; and Substance Use Inventory: Copies of these measures can be obtained from the first author.

4

Lifespan Development of Asian-Americans and Pacific Islanders: The Impact of Gender and Age Roles

Barbara W.K. Yee, Ph.D.

Editor's Note: *In this chapter, the author discusses the importance of cultural sensitivity to gender roles, age, and generation in health care programs for Asian-Americans and Pacific Islanders. Providers must be aware of how these factors affect personal and family interactions; delivery of primary health care; and health intervention research, evaluation and outcomes. Key issues of human development and their sensitive periods in the life cycle affect primary health care in systematic ways. Gender, age, generation, and acculturation status also have synergistic effects across the lifespan of AAPI individuals. Normative and nonnormative life transitions and their accompanying stressors must be considered during any health care interaction with Asian-American and Pacific Islander clients. For example, a Vietnamese preteen may be coping with physiological changes, acculturation stressors, and perhaps trauma from refugee experiences, all at the same time.*

Health care professionals must consider contextual factors, such as ethnicity, personal history, personal characteristics, and sociocultural environment. Knowing clients' personal and family histories is crucial to understanding patients and to meeting their health care needs, as well as to conducting culturally competent research and evaluation.

Health care providers must be able to communicate with their patients—a considerable challenge if the patient does not speak English, given the large number of Asian and Pacific Islander languages. Perhaps information technology will soon enable us to bridge the language barrier instantaneously.

The opportunity exists for improving the quality of care for Asian-Americans and Pacific Islanders and their families if health professionals become cognizant of the many lifespan development issues related to age, gender, and generation. Creative, culturally competent health interventions must take these issues into account.

Introduction

An individuals' cultural competence and social context play a pivotal role in development of maladaptation as a negative outcome of migration to a vastly different culture. Depression and substance abuse may be emotional and behavioral responses or indicators of maladaptation related to cultural competence (Tyler, Brome, & Williams, 1991). American neighborhoods and the larger society (i.e., the physical, social, and behavioral ecology of American communities) do not support traditional lifestyles and habits of newly transplanted Asian immigrants or refugees, nor do they readily accept Americans of Asian and Pacific Islander descent because of racism or cultural ignorance. This chapter examines the role that cultural competence may play in changing the risk for substance abuse and medication misuse among Asian-Americans and Pacific Islanders.

A lifespan development approach has been chosen as the organizing framework in this chapter to help us understand cultural competence among Asian-Americans and Pacific Islanders. This approach enhances our ability to identify major developmental goals and transitions to be made by Asian-Americans and Pacific Islanders at each stage of the life cycle. Understanding how Asian-Americans and Pacific Islanders successfully traverse normative developmental events enhances our knowledge about when nonnormative events may put these individuals at highest risk for maladaptation or substance abuse.

This chapter is organized into four sections. The first section discusses a lifespan developmental approach to human development. This theoretical approach provides the framework in which gender and age roles, multicultural competence, and lifespan development of Asian-Americans and Pacific Islanders can be understood. This framework provides assumptions about how humans adapt at each stage of the life cycle. The four basic premises are as follows: (1) Developmental change and aging are continual processes from birth to death and are not limited to any particular stage of life. (2) Developmental change occurs in various interrelated social, psychological, and biological domains of human behavior and functioning. (3) Lifespan development is determined by many factors and is influenced by change in the social environment. (4) Preventive or corrective intervention efforts aimed at optimizing human development benefit from considering the particular age, period, or developmental level in the context of the entire lifespan.

The second section discusses key variables and factors that are critical for evaluation of substance abuse prevention programs for AAPI groups within the lifespan developmental framework. A lifespan developmental model for Asian-Americans and Pacific Islanders is presented. Cultural features such as communication patterns, social relationships, cultural health habits, age and gender roles and their norms, alcohol and substance norms, and stigma and shame attached to "deviant" behaviors are discussed. Similar patterns and diverse cultural features are addressed, in addition to the role of cohorts and acculturation.

The third section presents key features of a culturally competent evaluation plan. Each aspect of the lifespan developmental model is discussed in terms of how these key variables must be addressed in an evaluation plan.

The last section is organized into three subsections and discusses some innovative approaches to evaluation of substance abuse programs for AAPI populations. The first subsection examines some innovative strategies for studying the efficacy of a community substance abuse and misuse program without traditional control groups. The next subsection presents key management strategies that are culturally competent with AAPI groups.

The last subsection suggests future research and outlines some policy issues that enhance the multicultural competence of substance abuse prevention programs, research methodologies, and their evaluation.

Theoretical Framework

The prevention of health-damaging effects on high-risk ethnic/racial populations is a difficult and complex task because the causes of such effects are multiple and synergistic. High-risk populations are by definition at risk for many negative health consequences, and they may avoid mainstream health services until problems reach crisis proportion because of mistrust, because they have been neglected or overlooked in the past, or because mainstream services lack cultural competence.

In community research, it is almost impossible to know, without an appropriate control group, whether one indeed prevented a negative health trend. We cannot scientifically demonstrate that the absence of a damaging health trend is the result of our intervention and not some other cause. A lesson learned from public health efforts to eradicate childhood diseases is that the effect of prevention measures may take generations to document hence the need for longitudinal studies. Furthermore, once the targeted negative health trend is eliminated or slowed, prevention efforts must continue because negative health trends tend to creep back or come back with a vengeance (as has been the case with continuing outbreaks of measles in urban, immigrant, and poorer populations).

The task of determining the effects of a prevention program is painstakingly slow and fraught with pitfalls and traps for the evaluator. In our efforts to improve prevention strategies we must conduct evaluations that incorporate cultural competence models for populations at high risk, focus on health-destructive as well as health-promotive mechanisms, and use theories of human development to guide and test these interventions. Lorion (1991) stated that application of theory may enhance our risk estimates for targeting prevention interventions, but we have an additional responsibility to measure our intervention's possible

iatrogenic risks, such as social labeling that may lead to a downward spiral of social breakdown or social incompetence (Kuypers & Bengston, 1973).

What is interesting is that researchers who have studied animals and people who are depressed and have "learned helplessness" (Seligman, 1977; Seligman, 1990), are now working on the concept of "learned optimism" and prevention of learned helplessness. These researchers have discovered how organisms learn to become helpless and then become depressed. In their discussion of learned helplessness, Seligman and colleagues have come up with an "inoculation" or prevention plan that can teach organisms and people how to overcome negative outcomes and become resilient in their efforts to cope with life's setbacks. Resilient and competent individuals come from all segments of our society, even from the most deplorable circumstances. Therefore, these multiple profiles of survival and success strategies must be examined in the context of multiple ecological niches (e.g., in a sociocultural context). Our current challenge is to determine what these survival profiles and patterns of human competence may look like within a cultural and ecological perspective. A particular behavior or comment taken out of context may appear at first to be maladaptive. When context is taken into consideration, the behavior could be viewed as adaptive for that particular set of environmental conditions.

Lifespan Developmental Approach

The following section outlines a lifespan developmental approach. This model describes developmental processes from birth to death. It points to several critical periods and conditions during the lifespan in which substance abuse prevention programs may intervene most effectively. This model of development across the life cycle can identify critical periods during which the potency of one's substance abuse interventions may increase or during which individuals may run into danger and engage in experimentation or high-risk behaviors. The model can also identify places where intervention can effectively direct individuals toward a more positive life course.

The lifespan developmental model views human beings as changing from birth until death. Different processes and capacities have varied patterns of growth and decline throughout the lifespan. This model calls attention to questions such as the following:

> *How do individual differences, such as temperament or socialization, and contextual or situational variables, interact to evoke certain behaviors and competencies? How do such individual differences fluctuate over the course of one's lifespan in response to differential societal demands from childhood, adolescence, young adulthood, middle age to later life? (Baltes & Goulet, 1970)*

A meta-analysis conducted across 20 rare longitudinal studies on drinking (Fillmore et al., 1991) found life-course variation by age, gender, country, and time of measurement. There were wide differences in drinking across the countries studied (Finland, Norway, Switzerland, Scotland, the United States, Canada, Germany, Czechoslovakia, Sweden, Israel, and Great Britain). There was greater heterogeneity in drinking within the younger age groups. Males, as a group, drank more than females. There was more homogeneity and a decline in quantity of drinking among the older age groups. More important, the frequency of drinking appeared to be set in youth and young adulthood, with modest fluctuations throughout the remainder of the lifespan. Here is a prime example of how cohort attitudes and behaviors about drinking established in adolescence and young adulthood determine the nature of subsequent patterns of drinking. What this study suggests is that evaluations of prevention programs must include information about country of origin, age and cohort, gender, ethnicity, and time of measurement variables.

This lifespan developmental model must consider the changing importance of contextual arenas and developmental goals, as well as the individual's ability to cope with these changing challenges at each stage of development (Brandtstadter, 1980). For instance, the specific array of life situational domains, developmental tasks or problems, and their relative importance may vary by the broadest definition of culture (e.g., age, society or ethnicity, social class, gender, cohort, and their respective differences in

values, attitudes, behavior, and norms) (Yee, 1977; Yee, 1992). Therefore, culture not only includes cross-cultural and subcultural comparisons, but also consideration of cohort (or generational), gender, regional, and social class issues.

In a lifespan developmental model, three types of variables can have a significant impact on an individual's development from birth to death. First, there are important historical events that mold a person's characteristics. For example, people who experienced the Great Depression are quite frugal because they lived through very difficult economic times. More relevant to substance abuse risk are the changing norms and generational differences regarding the acceptability of drinking or taking drugs and the perceived personal risk after engaging in such high-risk behaviors (Yee, Castro, Hammond, John, & Wyatt, in press). The growing field of risk perceptions and culture demonstrates that this is an important area of research, but explanations and patterns of risk perceptions are not simple across cultures or across subcultures (Kleinhesselink & Rosa, 1991; Vaughan & Nordenstam, 1991).

As important are the changing developmental requirements demanded at specific points in the human lifespan. Critical or sensitive periods may occur during times of transition. For example, preadolescence and adolescence may be considered critical periods of transition. Changes in physiology may coincide with emotional and societal expectations, leading to a dramatic shift in behaviors such as rebellion or experimentation. Even within a specific stage of the lifespan, there is a shift in feelings of efficacy; for example, school-aged children experience such a shift when making the transition from being the oldest in elementary school to being the youngest in middle school. Such dramatic sociocontextual changes may temporarily put these children at higher risk for substance abuse. This type of shift may also occur when a student becomes a working adult, when a person becomes a parent, or when a working adult retires. Times of change put the individual in disequilibrium and require adaptation. This instability in the construction or perception of the self may make the individual more vulnerable to depression, may lower self-esteem, and may encourage the individual to experiment or

try to regain control by trying new roles and behaviors—perhaps engaging in more risky behaviors, such as substance abuse.

During periods of transition, people may feel uncertain about how events are going to unfold. For some individuals, these life experiences have a steeling effect: The person responds to the challenge by becoming stronger and less vulnerable to future stressors (Kobasa, Maddi, & Kahn, 1982). Other individuals are overwhelmed by change and become more vulnerable with each additional stressor. Some individuals are "trouble magnets" or always "on the edge" or "on the brink of disaster." These individuals are constantly running into clusters of troublesome life experiences and face a downward spiral that leads to difficulty in getting out of these dilemmas. Bengston and Kuypers (1985) described the social breakdown syndrome, in which the family's labeling of an elderly person in times of crisis results in a vicious spiral of induced incompetence. This model can also help us understand how families operate under stressful conditions, how they negotiate change and transition, and perhaps how individuals get into trouble by experimenting with substance abuse as a coping mechanism.

Bengston and Kuypers (1985) posited a six-step cycle to a malignant spiral of breakdown, dependency, and increasing incompetence as individuals grow old in complex, industrialized societies. This model can be applied to those making transitions throughout the life cycle and to those making major life transitions such as being transplanted from less advanced cultures to modern societies. (This type of transition has been particularly hard on peoples such as the Hmong—nomads who had no prior written language—and genocide victims from Cambodia.)

In the social breakdown syndrome, a crisis, such as losing a job or having a heart attack, increases the feelings of *vulnerability* (step 1). The feelings of vulnerability occur as a result of perceived or real decreases in availability of resources. This person is now susceptible to *dependence* on external definitions of the situation because there are ambiguous norms or expectations about behavior in a new situation. This ambiguity and dependence on external definitions of the self contribute to an increase in vulnerability (step 2). The person may have increasing doubts about

the efficacy of using past patterns of coping in new situations or about being able to respond effectively to new problems. Doubts expressed by other people may reinforce the person's doubts about the adequacy of coping strategies and resources. Social *labeling* is the key to step 3; the person is labeled as incompetent. This labeling leads to step 4, which is induced *dependency*. In the new environment, the dependent person is expected to adopt the "sick" or dependent role and is expected to act accordingly. Step 5 involves the *atrophy of previous skills* for competence and independence. The social environment encourages learned helplessness because helplessness fulfills expectations of a sick, dependent, and incompetent person. The last step in the cycle (step 6) is *internalization* of the new, dependent identity. The individual now has come to believe what others believe: "I am incompetent and unable to take care of myself." Completion of the social breakdown syndrome leads toward another loop in the downward spiral; with this new identity of vulnerability the person faces another round of social breakdown, leading to generalization of incompetence in many aspects of his or her life.

This theoretical framework for understanding social processes may occur as a result of the elderly's declining physical or mental capabilities, but may also be used to understand what happens when a crisis occurs for younger individuals at risk for substance abuse problems and their families. Bengston and Kuypers (1985) suggested that interventions could be targeted for each step in the social breakdown syndrome. For example, changing the individual's or family's perception about the seriousness or amenability of the crisis can head off the downward spiral characterized by feelings of vulnerability and incompetence. Feelings of incompetence can be produced by normative and nonnormative transitions that may increase perceived stress and feelings of vulnerability in one's life.

Normative Transitions

Transitions during the life cycle may be normative or nonnormative. A normative transition is based on societal norms and expectations, which are usually age ordered or age graded and may vary by gender, by socioeconomic status, or across cul-

tures. In our society, attainment of a certain level of skills and behavior is expected when a person passes into the next stage of life. Social status may also be conferred during these normative transitions. Examples of normative transitions include changes in physical skills, such as learning to walk, or the many physiological changes that occur during adolescence. Normative transitions include timing and the ways in which society treats individuals, such as the definition of adulthood with allocation of privileges (e.g., the right to drink) and responsibilities (e.g., military service).

Nonnormative Transitions

Nonnormative transitions or unpredictable life events may have a significant impact on the course of a person's life or may dramatically change an important aspect of a person's life. Nonnormative transitions include divorce, disability, unemployment, the sudden death of a family member or significant other, natural disasters, accidents, rape, war, and imprisonment. These nonnormative transitions are not experienced at the same age or stage of the life cycle by different individuals. Extreme examples of nonnormative transitions are the experiences of Cambodians who survived the Pol Pot regime (Mollica & Lavelle, 1988; Rumbaut, 1991) and the multiple traumas experienced by those who escaped Vietnam in boats (Mollica & Lavelle, 1988). Many victims of such life-shattering experiences suffer from posttraumatic stress disorder (PTSD), which often goes unrecognized and untreated and has devastating consequences for those individuals and their families. Symptoms include chronic nightmares and hallucinations, intrusive memories, appetite and sleep disorders, depression, and drug and alcohol abuse; and PTSD may lead to violence against significant others.

In a review of stress models, Chiriboga (1992) noted an alternative to the life-events models of stress. *Microlevel stressors* are those of everyday life, such as getting caught in a traffic jam or misplacing the car keys. These types of stressors are associated with minor physical ailments such as the common cold. These everyday hassles are more strongly correlated with physical and psychosocial outcomes than are life events (e.g., Chiriboga, Yee, &

Weiler, 1992; Weinberger, Hiner, & Tierney, 1987) and are more commonly experienced, yet they are the least studied stressors. Microlevel stressors for immigrants include being unable to read street signs, understand school lessons, or fill out a job application. New or non–English-speaking immigrants from Asia and the Pacific Islands experience many microlevel stressors every day.

Mezzolevel stressors (Chiriboga, 1992) have been studied most frequently. Mezzolevel stressors occur less frequently than microlevel stressors and are generally more important and more memorable. Chronic mezzolevel stressors have been found to predict physical, mental, and social dysfunction for older populations (e.g., Pearlin, 1985). The chaining of supposedly random life events can create chronic stressors and have cumulative effects. For instance, in a 12-year longitudinal study of younger and older adults making transitions (high schoolers, newlyweds, empty nesters, and retirees), Fiske and Chiriboga (1990) found that life events at each of the five contact points were correlated to the magnitude frequently found in personality research.

Macrolevel stressors are events that affect society at large and generate a sense of heightened distress among the populace. Examples of macrolevel stressors include the Vietnam War, the fall of Saigon, the assassinations of President Kennedy and Dr. Martin Luther King, Jr., and the Great Depression. Macrolevel stressors have the potential for creating change in the short run but are responsible for change that may divert the trajectory of an individual's entire life (Birren, 1988; Chiriboga et al., 1992; Elder, 1974).

Yee's Lifespan Model for Asian-Americans and Pacific Islanders

Yee's lifespan development model for understanding cultural competence among Asian-Americans and Pacific Islanders is depicted in figure 4.1. First presented in 1977, this model has guided Yee's research on coping and adaptation mechanisms among elderly Asians. It identifies key variables that must be examined when conducting research on Asian-Americans and Pacific Islanders. For example, cohort and generational differences must be considered.

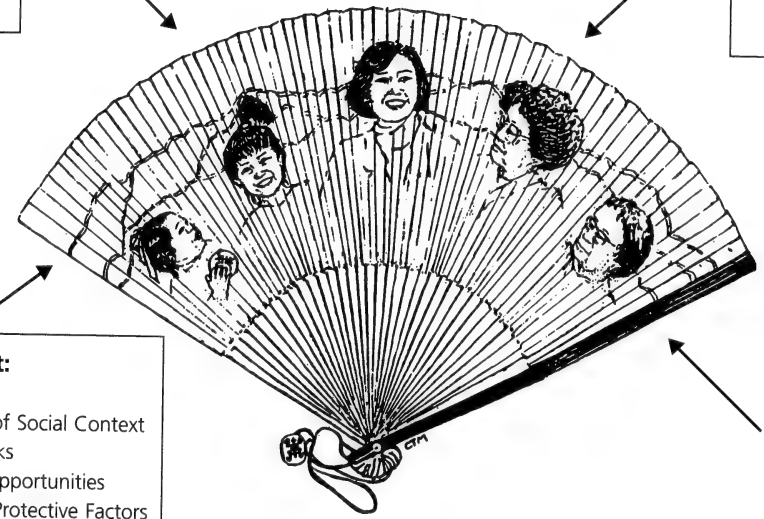

Figure 4.1—Lifespan development model: Understanding Asian-Americans and Pacific Islanders across the life cycle.
Source: Adapted from Yee (1977, 1992). Drawing by Carolyn T. McCoy.

Age-Related or Normative Changes

The first set of factors that have significant impact on our understanding of Asian-Americans and Pacific Islanders is the age-related or normative changes that the individuals or cohorts may be experiencing. What are the major biological changes that are occurring at this stage of life? For instance, what is the impact of hormonal and bodily changes on the adolescent, and how do the family and society treat this budding adult? What are normal changes in memory caused by aging, as opposed to disease? How does society react to older individuals who are losing their memory? This set of factors takes into consideration the impact of age-related social roles. Cross-cultural competence may require that people reorient the timing of the stages in their life cycle. For example, among traditional Laotian Hmong, a person who becomes a grandparent at age 35 may be able to retire because the children and grandchildren now have to take economic responsibility for the family. In our society, 35 is not an acceptable age to retire (Yee, 1992). Social roles and the timing of these roles across the life cycle may differ across cultures and social classes.

History

The first of the three major components of history is a person's *generational* or *cohort* history. This is a critical piece of information for Asian-Americans and Pacific Islanders. A person's generational status (immigrant or refugee, first American-born or second American-born) implies a whole cluster of variables that relate to each other in systematic ways.

Included in this component are historical fluctuations that affect the larger society. Historical fluctuations include changes in the degree of permissiveness about alcohol and drug abuse such as occurred during Prohibition and during the 1960's. Historical norms concerning substance use may set the tone of one's substance use socialization, and particular stages of life are likely to be differentially affected by these historical contexts. A large body of research suggests that adolescence and early adulthood are the critical periods when drinking behavior may be set.

Ethnic group history in the United States is likely to have a significant impact on the adaptation of Asian-Americans and Pacific Islanders. Each group has its own unique immigration history whose influence can be seen in the group's demographic characteristics and in the nature of the families within the group. Ethnic group history includes the way the United States reacted to the group's arrival in this country; the group's economic conditions; and the predominant political climate, including refugee or immigrant policies.

In his examination of change among European ethnic groups, Alba (1988) suggested that the impact of historical events on cohorts may be stronger than the impact of generation. For example, Japanese Americans in the United States who lived in California during World War II experienced internment camps. This historical event has had a systematic impact on these Japanese Americans (Nagata, 1990). Many *Nisea* (first American-born Japanese Americans) became highly acculturated as a reaction to other Americans questioning their loyalty during World War II. (This was especially true for preadolescents to young adults, who were formulating critical aspects of their identity.) The cohort history of elderly Japanese Americans who came to the United States at age 20 and have lived in America for 65 years is different from that of elderly Japanese who lived in Japan during the war and came to the United States last year. These elderly Japanese will have quite different perspectives on the war, will likely be culturally distinct, and may view the U.S. Government in different ways.

Personal history is also likely to affect the adaptation and coping of Asian-Americans and Pacific Islanders. A Japanese American living in Hawai'i is unlikely to have experienced the blatant racism during World War II that West Coast Japanese Americans experienced. The latter group's personal experiences with racism are likely to color their views, behaviors, and adjustments throughout the life cycle. Individual socialization history is included in this section because the particular set of circumstances in the family and neighborhood is also likely to influence cultural competence and adaptation among AAPIs. Native Hawaiian children growing up in a predominantly Native Hawaiian community in Hawai'i are likely to be different from what they

would be growing up in the Bronx with Hispanic or African American children. Personal history colors and shapes our cultural lenses because we incorporate culture from our families, peers, community, and society in the context of a specific historical period.

Personal Characteristics

Personal characteristics of the individual include personality and motivational characteristics, such as coping or adaptational behavior patterns; health and mental health status; personal skills, including physical, cognitive, social, and cultural competence abilities; and personal values and beliefs. Cultural competence and the ability to fend off dangers in high-risk environments for substance abuse are significantly influenced by characteristics of the individual. Ability and skills in the English language are important for cultural adaptation in the United States, especially if they are required for success in the individual's social environment.

Jones (1991) presented a model of adaptation called TRIOS, for the five dimensions that differentiate African American culture from European-American culture: *time, rhythm, improvisation, oral expression,* and *spirituality*. Time includes orientation, perception, and experience of time (e.g., linear versus nonlinear or present versus future time perspective). Rhythm describes recurring patterns of behavior within a given time, such as regular or irregular environmental supports and institutional control. Improvisation is the extent to which institutional structures enforce rigid standards of performance. Oral expression is the extent to which one places a premium on experience or on formal education. Spirituality describes the worldview toward nonmaterial causation with unknown force. Cultural differences in such characteristics should be incorporated in substance abuse prevention programming and evaluation.

Present Environment

The characteristics of the present environment or sociocultural context make certain types of demands on Asian-Americans and Pacific Islanders. These characteristics include ethnic density, cultural competence of the social context, social support and net-

works available to the person, economic and social opportunities afforded by the current environmental context, presence of risk or protective factors, and current stressors experienced by the person. An older, non-English-speaking Vietnamese woman living in a town in Vietnam might never experience adaptational distress because she has neighbors who speak the same language, have the same values, and behave in similar ways. The same woman living in a drug-infested neighborhood in the United States with only English- or Spanish-speaking neighbors would have difficulty asking for help if she fell and broke her hip. The characteristics of the current environment are very important to newly transplanted Asian-Americans and Pacific Islanders.

Werner and Smith (1982) found that among vulnerable youths living on the island of Kauai, those who were resilient were subjected to fewer cumulative life stressors in their family environments than were youths who developed serious coping problems in adolescence; this finding was especially true for females. Rutter (1979) found six risk factors to be strongly related to psychiatric disorders in poor neighborhoods in Great Britain: severe marital discord, low social status, overcrowding in the home, psychiatric disorder in the mother, a father with a criminal record, and admission into foster care or institutions. A slightly different risk pattern emerged for vulnerable children of Kauai. Werner and Smith (1982) found that maternal mental health problems; difficulties in family relationships; financial problems; permanent separation from the mother as a result of the child's placement in foster care or the mother's placement in a mental institution; and temporary separation from father (e.g., while the father was in jail) were significant discriminators of high-risk status among Asian-American and Pacific Islander youth.

In this chapter, level of cultural competence is defined as the degree of fit between the cultural competence skills and characteristics of the individual and the typical sociocultural environments of this individual. The literature has most frequently focused on the cultural competence of professionals and people who come in contact with the individual from another culture (see review in Cross, Bazron, Dennis, & Isaacs, 1989; Isaacs & Benjamin, 1991), rather than the cultural competence of this per-

son to adapt to and successfully cope with a multicultural environment. Cultural competencies, such as English language acquisition, attitudes, values, and behaviors, have been shown to vary by age, gender, and educational status (Berry, 1991; Rumbaut, 1991; Yee, 1982; Yee and Hennessey, 1982). Level of cultural competence may vary across these groups because of inherent differences in (1) abilities to learn massive amounts of new information and to practice or be exposed to aspects of the new culture; (2) the extent to which each individual was socialized prior to migration (e.g., how traditional); (3) opportunities to develop cultural competencies after migration; and (4) the desire to acquire these cultural competencies (Yee, 1992).

Evaluation of a substance abuse prevention program is also influenced by the cultural competence of evaluators and those to be evaluated. Sue (1991) argued that there are systematic cultural biases that influence evaluators or those doing assessments of minorities. Underestimation, overestimation, or systematic errors in interpretation of outcomes can occur if one is not cautious or culturally competent.

Impact of Age on Cultural Competence and Risk for Substance Abuse

Age of the target group should be considered in substance abuse prevention programming and evaluations. Age has systematic effects on risk of substance abuse, effectiveness of prevention programs, and evaluation of their impact.

Childhood

The majority of studies on adaptation and acculturation of Asian-American and Pacific Islander immigrants suggest that children show the greatest flexibility and ability to demonstrate cultural competence. This conclusion is supported by many studies that have examined children's ability to learn new languages faster; children have more opportunities to be exposed to the new culture (e.g., in school) than middle-aged or elderly immigrants (Lambert & Taylor, 1990).

Children's abilities to learn skills—such as language and behavior, cultural beliefs and patterns—are components of cultural competence. Children have a greater degree of plasticity because they are in the process of formation, in contrast to adults, who have completed major developmental tasks such as forming identity, personality, or motivational structures. Acculturated children may have difficulties with their very traditional immigrant parents or grandparents. Numerous family conflicts arise because of differences in acculturation levels across generations that lead to misunderstandings, poor communication, and differing beliefs about appropriate values or behaviors (Yee, 1992).

The children most likely to be vulnerable are those in the process of formulating their identity; when faced with a foreign culture, they are unsure about their ethnic identity and have low self-esteem. For example, adopted children who were not told of their adoption until adolescence and Ameriasians who were ostracized by Vietnamese people because of their American heritage (and who were abandoned by their fathers and sometimes their mothers as well) are likely to be vulnerable.

Adolescence

Although adolescence is frequently associated with great health and education risks, this period could be an opportunity for positive development (Takanishi, 1993). The risks of contemporary adolescence are experimentation with drugs, cigarettes, and alcohol; depression and suicide; exposure to violence, especially homicide; and pregnancy and sexually transmitted diseases.

Eccles et al. (1993) suggested that there is a mismatch between the needs of developing adolescents and the opportunities offered by their social environments. For example, for some individuals the early adolescent years mark the beginning of the downward spiral leading to academic failure and school dropout (Simmons & Blyth, 1987). Similar developmental declines during early adolescence have been documented for interest in school (Epstein & McPartland, 1976), intrinsic motivation (Harter, 1981), self-concepts and self-perceptions (Eccles, Midgley, & Adler, 1984; Harter, 1982), and lowered confidence in intellectual abilities following failure (Parsons & Ruble, 1977).

During early adolescence, increases have been noted in negative motivational and behavioral characteristics, such as test anxiety (Hill, 1980), learned helplessness in response to failure (Rholes, Blackwell, Jordan, & Walters, 1980), overemphasis on self-evaluation rather than task mastery (Nicholls, 1980), truancy, and school dropout (see Eccles et al., 1984 for a full review). Although these changes are not severe for most adolescents, this gradual decline in achievement motivation suggests that something is askew for these young people.

Eccles et. al. (1993) suggested that the co-occurrence of pubertal changes and mismatched characteristics between the new school and the changing psychological needs of adolescents account for some of the decline in motivation and increase in negative characteristics among teenagers. Clearly, one would predict that in the case of Asian-American youths who are more acculturated, there would be a closer fit between the school and the youth's psychological needs and more cultural and social support for academic excellence—and thus influences leading away from stigmatizing high-risk behaviors. A hypothesis that might be tested is that more traditional adolescents would excel in school despite school transition because in traditional Asian cultures, lengthened dependence on the family is the norm during adolescence into young adulthood. In the case of traditional Asian youths, many factors push or pull in the same direction and foster similar goals for this period of life: academic excellence, longer and more acceptable dependence on the family; and less abuse of substances.

Asian-American and Pacific Islander adolescents who desperately want to be accepted by their American peers may use substances to prove that they can be like other American kids, despite pressures from family in the opposite direction. More acculturated Asian adolescents may experience the decline in academic motivation and increase of negative characteristics seen in other American groups. For these acculturated Asian youths, various mediators would be pointed in opposite directions, some risk factors (e.g., peer acceptance of drinking and taking drugs) canceling out some protective factors (e.g., family nonacceptance of drinking and taking drugs, stigmatizing effects of getting into

trouble and reflecting badly on the family). These Americanized youths would be at higher risk for substance abuse because like their peers, their developmental goal for adolescence would be growing independence. In a family or school environment that seeks control as the ultimate goal, adolescents may seek more deviant avenues to gain control over their own lives. Experimenting with substances may be an attempt to gain control over one's own body and brain.

Many immigrant and refugee Asian-American parents expect their children to do their very best in school. This high expectation comes from the parents' traditional attitude that high educational attainment is the most successful way to achieve success in the new homeland. This value may be passed to the younger members of the family by both the immigrant parents and grandparents. Yee (1992) found that many middle-aged parents and grandparents failed to achieve their former occupational status after migrating to the United States. Many immigrant parents and grandparents sacrifice everything, sometimes working two or three jobs, so that their children can concentrate on studying and making straight A's in school, can get into the best colleges, and can move into careers that will ensure financial success in America. This emphasis puts a great deal of stress on Asian-American children, adolescents, and young adults to excel academically. This extraordinary pressure to excel in education is a double-edged sword. The benefit may be that as a group Asian-Americans are doing relatively well in school. A darker side of this trend is seen among children in Japan who develop ulcers or commit suicide if they don't make straight A's in elementary school. The hope and future of the family lies in the younger family members' scholastic and occupational achievements. This is a very heavy burden for children and adolescents. It may be the stressor that pushes some to substance abuse (Gleason & Sasao, 1992).

Young Adulthood

Adults who make the transition from one culture to another may find it a little more difficult to acquire new skills and change aspects of their personality, self-identity, core beliefs, behaviors, or feelings that may be incongruent with the new culture than do

children or adolescents (Yee, 1992). More superficial aspects of American culture (e.g., food, clothing, and housing) are easier to adopt or must be adopted because traditional equivalents are unavailable.

Parenthood appears to be another stressful life period. The *parental imperative* often pushes even egalitarian, two-career couples toward stereotypical gender roles (Gutmann, 1977), with Father as sole breadwinner, while Mother, on maternity leave, stays home taking care of the infant and the housework.

Middle Age

In a review of adult life crises, Lieberman and Peskin (1992) found an association between increased frequency of life events and onset of depressive illness in comparison with other patient groups and with the general population. The linkage of life crises to consequences for the individual is not a simple one. Modifiers of life crises are whether the event resulted in a loss, was controllable or predictable, was normative, or resulted in a role exit or entrance; whether the timing in the life cycle was as expected (on time) or not as expected (off time); and whether there had been historical changes in timing. Responses to life crises were dependent on accumulation of other life stressors, the subjective meaning of the life crisis, and whether the event had been anticipated. It appears that chronological age has little systematic influence on reactions to life events (Lieberman & Peskin, 1992). Frequency of life events is linked to age; more life events are reported by younger individuals. With increasing age, individuals perceive relatively less change in self-image.

Old Age

In a review article, Atkinson, Ganzini, and Bernstein (1992) argue that substance use disorders in the elderly have yet to be empirically studied. Several indications point to a lowered risk for the elderly, but the next cohort of elders (those currently aged 40 to 64) have a higher projected risk for substance use disorders. Yet experts admit that substance use disorders, inappropriate use of over-the-counter and prescription medications, and interac-

tions between such medication, pose more dangers to the elderly than to younger populations (see review in Yee & Williams, 1993).

Converging information indicates that substance use disorders will grow in many segments of the AAPI population living in the United States (Chi, Lubben, & Kitano, 1989; Johnson & Nagoshi, 1990; Johnson, Nagoshi, Ahern, Wilson, & Yuen, 1987; Kitano & Chi, 1989; Yee & Thu, 1987). Anecdotal and clinical evidence suggests that substance use problems are hidden among the middle-aged, elderly, and female segments of this population. A tragic case was reported in the *Houston Post* (November 29, 1990) in which a middle-aged Asian man shot and killed his four children and himself after being served with divorce papers by his wife. The man had consumed two six packs of beer before the shootings. Elderly Chinese women are at significantly higher risk for suicide than are other elderly groups (Heckler, 1985); some researchers have described alcoholism as a more passive and quiet form of suicide. These clues suggest that there might be trouble in this "model minority" population, and risk may be present but silent or invisible in members of this group.

Refugees face multiple adjustment problems immediately after migration, but a significant number of younger refugees adapt adequately with the passage of time (Rumbaut, 1985). In contrast, the passage of time may create more difficulties for older refugees within their own families and in dealing with society at large. Older middle-aged and elderly refugees, sheltered by younger family members soon after migration to this country, may face serious emotional turmoil 10 to 15 years later (Yee, 1990).

Elderly refugees may become more aware of their extreme isolation from the dominant society, whose cultural norms are very different from their own, and may realize that they live in a society that does not esteem elderly people as does their native culture (Yee, 1990, 1992; Yee & Hennessey, 1982). Elderly refugees experience value and role conflicts with their younger relatives who have rapidly acculturated to American ways. Family estrangement and generational conflicts create much emotional distress for elderly refugees and are their most frequently cited problem (Yee, 1990).

Impact of Gender on Cultural Competence and Risk for Substance Abuse

Carol Tavris (1991) reviewed the literature in the study of gender. She argues that too often males are the standard with which females are compared. This comparison puts females at a distinct disadvantage and is often inappropriate. The bodies of men and women differ in anatomical structure, hormones and biochemistry, patterns of health and disease, and responses to stress (Jensvold & Hamilton, 1989). For instance, alcohol behaves more unpredictablty in women than in men. This unpredictability may be due to greater changes in metabolism and hormones in women than in men (Jeavons & Zeiner, 1984). Women receive about 70 percent of all prescriptions for antidepressant medications, but the large majority of studies have been conducted on men. Substance abuse and its consequences are more complex for women; this complexity should be taken into consideration during prevention programming and subsequent evaluation.

Tavris (1991) makes a persuasive case for the deconstruction and reconstruction of gender by setting aside empiricism and positivism, which emphasize objective facts, and accepting the notions that are intrinsic to Eastern philosophy. Zen teaches that the universe is in a constant state of flux, that art and science can exist in this changing context, and that events and objects depend on the perception of the beholder as much as on their own qualities. This perspective reveals that concepts that seem to have timeless and universal properties can vary in their meanings and connotations throughout history and across cultures. Tavris does not suggest that we abandon our scientific methods, but rather that we examine them, add new ones, and expand our view of the problems and their methodologies used to investigate them.

Tavris (1991) notes that there must be a renewed emphasis on the external factors and contexts that perpetuate or reduce gendered behavior. She regards many gender differences as a result of situational contexts and roles that each gender typically plays. For example, in a longitudinal study of vulnerable Asian-Americans and Pacific Islanders living in Hawai'i, Werner

and Smith (1982) found an interaction between gender and life stage. These authors found that up to age 18, boys had more serious learning and behavioral problems, but that they then improved. New problems had appeared for girls in the second decade of life, with an increase in serious mental health problems among girls in late adolescence. Parental understanding and support had a pivotal role in enhancing the psychological well-being of teenagers on Kauai. Resilient women were more likely to identify strongly with their fathers than with their mothers, yet special mother-daughter bonds persisted in the second decade. Girls were more willing to confide in their mothers than in their fathers. Family closeness and respect for individuality bolstered the self-esteem of teenagers on Kauai.

Gutmann (1975) found that parenting accounts for several shifts in gender roles across the life course and across cultures. Each species evolves patterns of behavior that ensure that children are conceived and cared for until they can survive on their own and become parents to the next generation. This species requirement is one aspect of what Gutmann calls the *parental imperative*. An infant or young child is very vulnerable and needy. Parents fulfill different roles to ensure that this vulnerable human being is cared for. Mother keeps the infant close for breast-feeding and therefore becomes the one to stay at home to nurture the child. Father may provide material security to the child and mother. Each parent represses characteristics of the other gender until middle age, when parenting is almost successfully completed. Successful mothering characteristics are nurturance, sensitivity, flexibility, and accommodation; successful fathering characteristics are competitiveness, emotional control, and goal-directed for occupational success. After the vulnerable child achieves adulthood, sex-stereotypical characteristics of the parents may become more balanced. Gutmann (1975, 1977) found that elderly men become more nurturing and elderly women engage in more active mastery. Thus, gender roles may produce psychological characteristics and behaviors typically exhibited by males and females at different stages of life.

Gender roles may also vary by cohort and socialization history. The interpretation of one's learned gender roles and culture

can have dramatic impact on whether one is willing to take risks with substances.

Gender roles have different implications for men and women. For instance, Holahan, Holahan, and Belk (1984) found that different situations create different stresses for males and females. Men report more stress events from income loss, work, and physical illnesses. In contrast, women report more social stressors. Women also report more vulnerability to stressors, as evidenced by higher physical and mental distress levels. Weaver (1989) found the same gender pattern but found more stressors for older African Americans, who reported twice as many daily hassles and four times as many major life events as were reported by midlevel or managerial White respondents. Weaver concluded that gender moderates the stress-health relationship. The relationship between stress and health was much stronger for women than for men. Daily stress for African American women had a significant impact on their chronic health problem frequency, somatic symptom severity, and global health. In contrast, stress was related to vulnerability in chronic health conditions for men.

Elderly Asian women may be especially vulnerable to feelings of helplessness in a strange country. Early reports in refugee camps indicated that middle-aged and elderly women were more depressed than women in other age groups (Liu, Lamanna, & Murata, 1979). This increased vulnerability, coupled with the traditional role of the older woman in the family and society (as an ideal and as practiced by the individual) contributes to more difficult adjustment and eventual adaptation of these older Asian women in the United States.

Yee (1992) examined successful adaptation by elderly Vietnamese and found that elderly Vietnamese women may become progressively at risk for substance abuse and mental health problems as their family becomes acculturated. Elderly Vietnamese women perform vital childcare and household responsibilities for their three-generational families. These critical family responsibilities isolate these elderly women from mainstream American society and from daily interaction with members of the Vietnamese community. While engaging in these vital roles, elderly Vietnamese women do not have the time or opportunity to

learn multicultural competence skills, the English language, or particularities of American culture that will help them cope with aging in America (Gelfand & Yee, 1992). If the elderly Vietnamese live in an ethnic neighborhood with other Vietnamese nearby, then acquisition of English language skills is not a requirement. The social context is a significant modifier of the elderly Asian person's adaptation to American society.

Shepherd (1992) found that many Vietnamese women are suffering from posttraumatic stress disorder (PTSD). Men and women have different experiences with the same life event (e.g., migration, camp, escape, or relocation). According to the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1980), some stressors produce more severe PTSD than others. For example, the disorder is more severe and lasts longer when the stressor is human. Until recently, PTSD was regarded as almost exclusively a male problem (Rothbaum & Cole, 1986). The negative effects of torture and rape are longer lasting and more severe than trauma resulting from an accident or natural disaster. Emotion numbness, lack of responsiveness, and efforts to avoid thoughts or feelings that might serve as reminders are typical reactions. Coping strategies to block out intrusive traumatic memories are sought. Substance abuse is a common behavioral coping strategy among sufferers of PTSD, such as Vietnam veterans (Lauffer, Gallops, & Frey-Wonters, 1984). Also of interest is that PTSD is five times more likely to result in alcohol dependence among female veterans (Kulka et al., 1990). Substance abuse often also occurs as a behavioral response to violent crimes such as rape (Kirpatrick, 1990).

From the limited data available, it is currently estimated that AAPI women have lower rates of substance abuse than do their male counterparts. This statement must be regarded with caution because the data are quite limited and women can more easily hide their substance abuse problems if working exclusively at home or if no one suspects that they have a problem. Even if the rate of substance abuse among AAPI women is empirically verified to be lower, these women still suffer the consequences (e.g., sexual or child abuse, increase of social and economic stressors, codependency issues) if male members of their families are abusing alcohol or drugs.

Both age and gender considerations affect substance abuse prevention programming and culturally competent evaluation for Asian-American and Pacific Islander populations.

Key Features of Culturally Competent Evaluation

House (1990) accurately described how values are embedded within the specific research methodologies we employ. For instance, Jesse Jackson's PUSH/Excel Program was established at several sites around the country. Evaluators of the program could not find any evidence of standardization across the sites. They found different activities at different sites and concluded that there was no program because there was a lack of standard components. The problem with this approach is that there is no room to evaluate innovations for accomplishing the same goals with different strategies and in different communities. One of the key components of a culturally competent evaluation is to be flexible—to take account of differences in processes, methods, and activities at various sites that are directed toward achieving the same basic goals of the project (e.g., academic progress and excellence, improvement in self-esteem). This flexibility allows various programs around the country to try innovative activities to address the unique needs of their communities (variations related to ethnicity and cultures, social class, age, gender, and geography).

Cohen and Kibel (1993) argued that in an open-system evaluation a hierarchy of results from prevention projects can be expected. Both the magnitude and longevity of results should be considered. Our expectations for prevention efforts should be in synchrony with the reality of resources devoted to the project as well as environmental constraints over which the project has no control. According to Cohen and Kibel (1993), the first step in evaluation is willingness to learn about the substance abuse prevention program and behaviors. Second, commitment to participation in the proposed program must be made and sustained in order to achieve long-term changes in substance abuse knowledge, skills, attitudes, and behaviors. The third step is capacity

enhancement, in which actual changes in individuals or organizational practices are implemented to prevent, reduce, or eliminate substance abuse. The fourth step, a focal point of typical evaluation plans, is the measurement of observable outcomes in the target population such as the noninitiation, reduction, or elimination of substance abuse. The fifth step, another typical evaluation strategy, is the examination of measurable impacts as indicators of community-wide substance abuse prevention efforts (e.g., a reduction in alcohol-related traffic fatalities). This step reflects cumulative successes in producing outcomes at the individual and organizational level.

The indicators of success for prevention programs among Asian-Americans and Pacific Islanders must take into account the community's social context. Neighborhood, county, and local contexts and societal changes must be reflected in the evaluation assessment. This community climate changes the very nature of interventions. Failures of prevention programs in these particular settings may not have implications for the efficacy of these prevention programs elsewhere; they simply may not have worked under those particular circumstances. Lack of efficacy could be attributable to a hostile context rather than the program itself. To make this determination, context variables must be included in any evaluation plan.

Patton (1990) outlines some strategic themes in qualitative inquiry that are ideal for examining multicultural populations and methodologic appropriateness in a variety of changing contextual conditions. *Naturalistic inquiry* examines real-world situations as they unfold; no predetermined constraints are imposed on outcomes. *Inductive analysis* requires an immersion in details to discover important categories, dimensions, and their interrelationships. There is exploration of open-ended questions rather than testing of a theoretically derived hypothesis. The science of substance abuse prevention in Asian-American and Pacific Islander populations is new; therefore, naturalistic inquiry and inductive analysis are critical starting points. A *holistic* perspective examines the whole phenomena as a complex system that is more than the sum of its parts. There is a focus on complex interdependencies that cannot be meaningfully reduced to a few discrete

variables and linear, cause-and-effect relationships. This perspective fits naturally into the Eastern philosophy of many Asians, and the worldviews of Pacific Islanders and may be acceptable among more acculturated members of these populations. *Qualitative* data are detailed, in which full descriptions capture people's personal perspectives and experiences with direct quotations and testimonials. *Personal contact* and *insight* are achieved by the evaluator, who is on the front lines talking directly to the people under study. The researcher's personal experiences and insights are a critical part of inquiry and improve understanding of the phenomenon under study. *Dynamic systems* exist with attention to process and assume change is ongoing whether the focus is on the individual, organization, or an entire community. A *unique case orientation* assumes that each case is unique by respecting and accurately documenting the specifics of each case from the observer's perspective. *Contextual sensitivity* places the findings in a social, historical, and temporal context. *Empathic neutrality* assumes that complete objectivity is impossible, but that understanding and developing empathic insight into relevant data and taking a nonjudgmental stance toward whatever content may emerge is possible. *Design flexibility* permits adaptation of inquiry as understanding deepens or as the situation demands. Evaluators should be open to changes in designs as the situation warrants and should be able to pursue new paths of discovery as they emerge.

Cookbook approaches to evaluation are not likely to work in multicultural populations. Kim, McLeod, and Shantzis (1992), Yen (1992), and Patton (1990) support the notion that *flexibility* and *sensitivity* to cultural differences (including cultural values and gender, social class, regional and geographic, and age and cohort differences) are essential components of effective evaluation among diverse populations. This chapter does not discuss each ethnic group that makes up the Asian-American and Pacific Islander group, but gives examples of how our evaluation strategies may differ for these diverse groups. More detailed discussions of cultural competence among Asian-American and Pacific Islander groups may be found in the literature (e.g., Cross, et al., 1989; Kim et al., 1992; Lynch & Hanson, 1992; Mokuau, 1991; Tyler, et al., 1991; Yen, 1992).

Culturally Competent Evaluation of Community Prevention Programs

Culturally competent evaluation must include process evaluation that is culturally sensitive to major cultural values, social interaction patterns, and behaviors of Asian-Americans and Pacific Islanders. Before any program is implemented, an assessment that prioritizes and incorporates goals generated by the Asian-American and Pacific Islander community must be reflected in the programming and its evaluation. The most essential data to be gathered are ethnicity, age, nativity and generational or immigration status, socioeconomic status, cultural competence skills (e.g., English language skills), adaptation and coping skills, nature of social networks, and opportunities to learn cultural competence skills.

Researchers and evaluators of programs to prevent substance abuse among AAPI populations must vigorously seek out hidden populations for needs assessment and evaluation of existing programs. As in any research design, those who volunteer are likely to be members of the population who are easy to contact and who are not as likely as others to be in need of interventions. Hidden populations are those who are isolated or hidden at home, such as the elderly or women, and those who are mistakenly thought not to have problems. Finding hidden populations is a difficult task, but it must be done in order to craft substance abuse prevention programs that will be meaningful and effective with these populations.

Grassroots data collectors could canvass their neighborhoods to recruit these hidden populations in their communities. This costly and intensive sample may be small, but if more cost-efficient data collection strategies can be used (e.g., telephone surveys or institutionally based groups—ethnic organizations or mutual aid societies, schools or workplaces), the findings can be triangulated. If convergence is found, the evaluator can proceed with less costly data collection procedures. If differences are found between the samples, the evaluator must go back and expand research efforts on the hidden populations in the community.

Another effective strategy is to recruit hidden respondents in social contexts likely to be inhabited or visited by these individuals. For instance, Chin, Lai, and Rouse (1991) found that the social contexts that contribute to alcoholism among working-class Chinese males in New York City may be different from the social contexts that promote drinking among middle-class, highly acculturated Chinese. Numerous restaurant workers are poor, uneducated, and isolated both from their families and from the general American culture, and have highly stressful work conditions that encourage drinking on the job as a substitute or reward for poor pay or as the only kind of recreational activity available to them. The stresses of acculturation to a new country and false expectations about the "Gold Mountain" lead to inordinate adaptational stresses during the years after migration to this country. Recruitment of respondents in these types of social contexts and in the throes of adaptational crises may be one of the most fruitful prevention research strategies for AAPIs, especially working adults.

Yu and Liu (1992) argued that racial and ethnic identifiers must be improved in the national data bases. This wise advice should be heeded by substance abuse prevention evaluators of AAPI communities. For example, rates of intermarriages for Japanese and Chinese on the West Coast are 50 percent. Having only one ethnic/racial designation may confound our interpretations of substance abuse prevention data for multiracial Asian individuals. A culturally competent question about ethnicity of the target respondent includes questions about percentages of ethnic background with enough specificity to reflect diversity of Asian-American and Pacific Islander groups, as well as the ethnic contributions of mothers and fathers.

The setting in which a substance abuse prevention program and its evaluation are conducted must be carefully created. For instance, Gallimore, Boggs, and Jordan (1974) noted that Native Hawaiians prefer personal relationships to impersonal "professional" relationships. As a prevention program staffer, you should either personally know the target persons or get to know their names, know a little about them, and greet them by name. This communicates that you think they are important because you know their names and remember something special about them.

Many residents of Hawai'i, especially those of Asian or Pacific Islander descent, operate in the context of such personal relationships and spirit of *kokua* or mutual cooperation. Preventions programs for Hawai'i residents should adopt this personal relationship, cooperative learning, and problem-solving format in order to be effective.

Filipino psychologists argue that anthropological data collection techniques (e.g., *pakapa-kapa,* being a participant observer, or *pakikisama,* frequenting the environments of one's respondents or inviting respondents into one's home) are very useful for eliciting reliable and valid data among Filipino populations (see review in Pe-Pua, 1989). Targets of evaluation may be small groups or classrooms of people who promote data points (e.g., group means), rather than individual assessments.

In a qualitative approach to needs assessment, Gleason and Sasao (1992) found that AAPI focus groups presented different profiles of alcohol or drug use history and prevalence, risk factors, and substance abuse program effectiveness. As part of a multimethod approach to discovering future research priorities, these authors examined whether qualitative and quantitative assessments from a variety of data sources provided convergence in findings when data were inconclusive for providing research suggestions.

Sasao and Sue (1993) compared (1) community telephone surveys of community residents; (2) community forums of service professionals; (3) service utilization indicators of substance abuse defined by administrators and policymakers; (4) client focus groups of current and former alcohol and drug abusers in communities; and (5) substance abuse prevention services surveyed by service providers. This study suggested great diversity in the profiles of various AAPI groups. Data obtained by these various methods can lead to effective evaluation plans tailored to the specific population targeted.

Roberts et al. (1989) found that national programs can be successfully adapted to meet the needs of Japanese and Filipino elders living in Hawai'i. The Staying Healthy After Fifty program included goals such as increasing exercise and weight loss and decreasing consumption of alcohol and snacks. The authors found

that Japanese and Filipino elders readily accepted sessions when the authors (1) reduced the content of sessions and increased discussion time with skill-based learning; (2) rewrote materials to contain local or "Hawaiian culture" pictures and pidginized language; (3) used bilingual team members for Japanese and Filipino groups when needed; (4) revised and sorted evaluation forms on the basis of the pilot data identifying confusing and misinterpreted items; (5) reduced written homework, reading at home, and self-tests; (6) substituted "very good" for "excellent" as a response choice for traditional Asians because they are socialized to give humble responses (introducing possible response bias); (7) made subculture-specific adaptations such as using Japanese or Filipino expressions throughout lessons, and communicated these adaptations to educational teams in training; and (8) delayed offering materials to non-English-speaking or -reading persons until audiovisual materials in their language could be developed.

Age-Sensitive Evaluation Strategies

Evaluators must pay attention to the hierarchical nature of age and role relationships in traditional AAPI families. If in doubt, it is wise to use the traditional age and role expectations when interacting with middle-aged and elderly individuals. Asian-American and Pacific Islander elders within the family must be recognized and shown respect before interactions with younger members of the family begin, even though the primary target of the intervention is the younger generation. Enlisting the cooperation and endorsement of family elders is essential to getting permission and support for substance abuse prevention efforts targeted toward younger Asian-Americans and Pacific Islanders.

Targeting particular age periods for evaluation assessment would be a fruitful use of resources. For example, current research suggests that preadolescence may be a particularly difficult time for youth. Preadolescence, coupled with migration stress and perhaps PTSD issues in the family, puts youth at higher risk for substance abuse. Another age period of possible high risk is middle and old age for men, who experience significant downward mobility after migration to this country.

Gender-Sensitive Evaluation Strategies

In traditional AAPI communities, it is wise for prevention program staff to adopt rigid gender roles, behaviors, and status recognition when interacting with more traditional or middle-aged and elderly persons. Egalitarian interactions may be accepted by highly educated Asian-Americans and Pacific Islanders, but caution must be the rule.

The types of questions asked, how they are asked, and by whom they are asked can influence the validity of answers obtained from such evaluation efforts, and therefore influence prevention strategies. It is becoming increasingly evident that much of our empirical work has been gender-, culture-, and class-specific (i.e., most research, needs assessment, and evaluation have been conducted on White male middle-class respondents) and may be less appropriate for women who hold very traditional Asian and Pacific Islander traditional gender roles.

As highlighted by Reed (1985), women are the minority in most substance abuse treatment programs. Although the majority of studies suggest that women are proportionally less likely than men to abuse substances, there is some anecdotal evidence that women may be a hidden population of substance abusers. Women do not seek treatment because current programs do not match their needs or have too many negative implications for their families. For instance, Hershell Warren of Meharry Medical College found that the biggest barrier to seeking substance abuse treatment for women was fear (Ryan, 1993). These women feared having their children taken away, being evicted from their housing, and being labeled by the stigma attached to substance abuse among women.

The fear for Asian-American and Pacific Islander women is greater because honor and integrity of the family is a central value in their cultures. For example, Yee (1992) found that the family was of primary concern for Southeast Asian refugee women. If treatment for substance abuse jeopardized their family in any way, such as touching the family with the stigma and shame associated with substance abuse or mental illness, Asian-American and Pacific Islander women would not seek help. They would hide their problems from the outside world and perhaps from family

members, and might continue to function in their jobs to maintain family finances until their substance abuse became debilitating and obvious. Because individual needs are subordinate to the needs of the family and because of the subservient role of wife and mother in traditional Asian families, AAPI women will not "make waves" or admit to substance abuse problems and seek treatment. Unless these negative family repercussions are removed, we will not see many Asian-American and Pacific Islander women in treatment unless they are forced into treatment by some outside force (e.g., employers, police, or courts).

However, targeting prevention and evaluation efforts to older and female members of the family is likely to be quite fruitful. The characteristics of AAPI women that are barriers to obtaining substance abuse treatment are the same characteristics that make them effective communicators of substance abuse prevention messages. Asian-American and Pacific Islander women know what is happening in the family and are likely to seek help for a substance-abusing child or spouse, yet they need to be educated about substance abuse and its prevention. AAPI women and the elderly are conduits to their families in much the same way that gatekeepers (e.g., religious, ethnic organization, and mutual aid leaders; or professionals from the ethnic group of concern) are to their respective communities.

It is critical to remember that Asian-Americans and Pacific Islanders vary by age, gender, and ethnicity. These cultural roles and prescriptions have major implications for the nature of life situations that are likely to nurture risk for substance abuse, shape ability to cope with stressors, and shape help-seeking patterns. More important, these characteristics of culture have systematic impacts on the efficacy of substance abuse prevention programs and their subsequent evaluation.

Specific Evaluation Strategies

The use of multiple measures, rather than single measures, to evaluate community prevention programs across time and settings is likely to give the most accurate indication of program efficacy. Prevention of health-damaging behaviors such as drug abuse is more likely to be effective with multiple interventions

over time. Therefore, including multiple indicators of program efficacy should reflect the complexity of the data and may increase the variance that is accounted for (Lorion, 1991).

Periodic telephone surveys about substance abuse values, behaviors, and attitudes in small samples of Asian-Americans and Pacific Islanders (who could be chosen by surnames in phone listings or on utility hookups) prior to, during, and after the interventions would provide another source of evaluation data. The anonymity provided by telephone surveys may result in data that otherwise might have been distorted or denied. The most difficult questions concern socioeconomic status; money and sources of income are considered private matters. Other difficult questions concern sexual behaviors, mental illness, or any culturally defined deviant behavior that may induce shame. Good proxy indicators of socioeconomic status are past and present occupational status and educational level.

Multiple sampling strategies—such as focus groups; random interviews on street corners or in ordinary settings such as shopping centers, grocery stores, or clinic waiting rooms; and use of key informants such as church leaders, elementary school class officers, or gang members—are likely to give evaluators a more realistic view of what is happening in the community. Holding interviews in women's restrooms or conducting interviews in pediatricians' offices in ethnic enclaves would enhance the ability to further target evaluations.

A deeper evaluation of a smaller subset of families could be done. Two to three members of a family (representing different generations, such as child, parent, and grandparent) could be interviewed separately. The interviewer could measure variables known to be related to substance abuse behaviors and attitudes while examining family transmission of these issues. Peers of these families could also be interviewed for examination of peer influences on substance abuse.

Efforts to piggyback substance abuse prevention studies with ongoing health, census, and other national studies would enhance cost-effectiveness and increase the number of data that could be collected on the same individuals. Including substance abuse questions in other studies might decrease underreporting of sub-

stance abuse for Asian-Americans and Pacific Islanders. Using existing data can help shorten the evaluation process and decrease respondents' boredom at repeatedly having to answer the same questions. As long as confidentiality is ensured, this data linkage between studies will allow us to increase the power and sophistication of the data analytic techniques that we use. For instance, Medicare and Medicaid cards provide demographic and other information; if these data can be linked with substance abuse questions, it would be possible to do prospective and retrospective studies over time without repeatedly collecting duplicate information from respondents.

Evaluation data should be collected and organized in a pyramid format, with the most information (the bottom layer) coming from the targets of the prevention program, and data should be gathered from each layer of individuals or groups who were involved in the program. Information gathered at the grassroots level creates building blocks for the next level. For example, a substance abuse prevention program in a school should obtain evaluation information from students, teachers, parents, grandparents, caretakers, administration, and parent organizations. Hopefully, there will be cultural interpreters at each level so that information will not be distorted or misinterpreted by evaluators. Information from each layer will be transmitted to the evaluators and the cultural team, who then summarize the findings and disseminate them to all layers of the program to obtain feedback, get further cultural interpretations, and verify the accuracy of the data.

Baizerman and Compton (1992) found that methodological diversity in evaluation and use of students, counselors, teachers, and school administrators as informants and evaluation consultants yielded a dynamic dialog among these groups. Paying school district staff to collect data enhanced the efficacy of sampling and data collection. These authors found that getting input data from each level of the school empowered program participants. Such activity produces a phenomenon similar to that of quality management circles, in which the quality of a product is improved because suggestions are gathered from all levels of the production line—workers, supervisors, engineers, and management.

Evaluation data should be gathered with the latest technology, such as interactive video, computers with CD-ROM capabilities, satellite hookups, and computer networking and bulletin boards across CSAP programs for technical assistance, transfer of information, and collaboration. This technology allows more flexibility in programming and evaluation. For instance, if computers are used to administer prevention education and evaluation, multiple languages can be used, consent can be gender- and age-specific, and AAPI respondents may like the face-saving aspects of using computers. The efficacy of interactive video has been demonstrated with poorly educated or nonliterate respondents (Sweeney, Gulino, & Small, 1990). In that study, the learning station contained multimedia programs and used a laser disc player, a microcomputer, and a touch-sensitive monitor with graphics overlay capabilities; it was designed to eliminate the need for computer literacy or typing skills. Of course, use of interactive video as the sole methodology may be overly restrictive if program participants are computer-shy or if the costs of the technology are prohibitive.

Low-technology interventions and evaluation methods could also be created, such as games to be played in class, teams competing in substance abuse prevention baseball, or other fun activities. A standard game could be developed to collect baseline data and then could be played again after intervention. Moreover, classes can create substance abuse prevention games for each grade level as projects. Students in higher grades can research substance abuse and then turn their knowledge into a game to be used in competition. National or regional competitions could be held, such as spelling bees, to serve as indicators of program success. Art projects, posters, slogans, plays, books, or video productions could be used to communicate the message. The beauty of such projects is that games and products will be age graded and in the appropriate language and culture, since they were created by and for the target group.

Use of peers (peers of the same age or ethnicity or peers who are former drug or alcohol abusers) as messengers and data collectors has been demonstrated to be effective. For example, Turner, Black, and Taylor (1992) hired current and former drug abusers

and longtime residents of the neighborhood to collect data on HIV risks among African American and Hispanic drug abusers. As a security measure for interviewers, these interviews took place during the day on the street. Respondents were given a choice of completing the questionnaire themselves or having it administered by the interviewer. It was believed that the rate of self-completion would be low because respondents would fear identification by police or parole officers. In addition, higher security for interviewers meant less confidentiality for respondents. In spite of this difficulty, the refusal rate for this group was only 33 percent. Sole reliance on self-report data may underreport drug abuse and overreport readiness to reduce risks, yet findings mirror those found in large urban areas. If free preventive services (e.g., condoms, bleach to clean needles) were available, respondents said they would use them. Counting the use of free services may be another indicator of our prevention measures' success.

The targets of prevention programs and evaluation efforts should be those most at risk, yet these individuals and groups are the most difficult to reach. Innovative strategies to locate these individuals, target prevention programs, and evaluate the efficacy must be invented.

Convergence and triangulation of findings with a variety of measures and samples including self-report, observation, and use of key informants provide more confidence about the external validity of the evaluation. The use of both direct and indirect measures of substance abuse, to avoid public, shame-provoking admissions, is probably a requirement in research with AAPI populations. The stigmatizing, shame-avoiding and face-saving cultural tendencies will prevent traditional Asian-Americans and Pacific Islanders from admitting that they or family members abuse substances. Questions about substance abuse in other families in the community (without name identification) might give the evaluator some indication of trends.

Offering multiple services for AAPI families within the same building (i.e., a one-stop service center) would significantly increase use of shame-inducing services (e.g., services could be offered for mental health, sexually transmitted diseases, genetic

diseases, or substance abuse) and reduce the stigmatization of substance abuse in the AAPI population. Multiple prevention interventions should target the primary, secondary, and tertiary levels.

Cost-benefit ratios of prevention programs should calculate fatalities or disability costs in terms of the decrease in productive years. For example, if productive years average 45 for a man, then a male dying in adolescence from a drug overdose would account for a loss of 45 years. The formula would be slightly different for deaths caused by drug overdose or multiple prescription drug use in retired senior citizens; lost family, volunteer, and community service hours should be counted as 10 to 20 hours a week, and age at death should be subtracted from average life expectancy.

It is often difficult, especially when resources are short, to broaden the scope of our prevention programs. As much recent research has indicated, many high-risk behaviors stem from a consistent cluster of core sociocontextual and personal characteristics of populations at high risk for substance abuse (Jessor, 1993; Yee et al., in press). Instead of merely focusing on fixing the parts of people that must be changed, we need to bolster their given strengths and enable their natural support systems to be more effective in helping them avoid substance abuse. The current trend that examines how resilient individuals conquer terrible odds and blossom into vibrant, successful people has many lessons to share. Substance abuse, like many other problems in our society, is the result of multiple factors. These include multiple stressors, lack of opportunities for or availability of constructive activities, and low self-esteem or poor self-identification. Programs should be implemented that bolster self-esteem and hardiness (e.g., hardiness training camps), improve aspects of self-identity, teach cultural pride, reinforce positive behaviors, increase opportunities and make constructive activities available, and decrease stressors while improving the efficacy of health-promotive stress management techniques. Such programs focus on how to help rather than how to punish. If this strategy is followed, possible iatrogenic effects can be avoided because the negative social labeling of children at high risk can be avoided.

A variety of summer school cultural heritage or wilderness camp experiences could be offered for each age group—grouped by gender and ethnicity, if feasible—to facilitate networking and development of social supports. The goal of these camp experiences would be to bolster hardiness, improve self-esteem, and encourage ethnic pride while helping to improve intergenerational relationships and understanding, and to provide these campers with a cathartic experience that would enhance the strength of substance abuse lessons and provide social support networks. Sharing highly charged emotional experiences in which the person is challenged physically, socially, or cognitively but is supported by the group produces more long-term behavioral changes than do classroom lessons. This makes logical sense because these types of wilderness camps or encounter group experiences (preferably nonconfrontational and culturally and personally supportive variants) change self-perceptions in a safe environment. These changes move individuals in the same directions as others and onto a more positive life path.

Substance abuse, maladaptation, and mental illness are caused by sets of complex factors. Yet when solutions are proposed, inadequate funds limit the implementation of holistic programs. Therefore, we should not be surprised to discover that programs have small effects or produce very few long-term changes.

It is often difficult to measure the effects of preventive intervention services. We tend to be overly optimistic about the effects of our interventions, and then when we do not achieve these unrealistically high goals, we say that our program has failed. One way to get around this human dilemma is to have general long-term goals, many realistic short-term goals, and micro-term goals. These goals can be revised on an ongoing basis because conditions in our communities can change very rapidly. More important, there are multiple means to the same goal; acceptance of these various avenues is the cornerstone of a culturally competent evaluation plan. Activities and even program goals can be suggested by the prevention team, but the final decision and approval should come from the people in the community. This is the lesson learned from Head Start.

Management Strategies

A full-time evaluator with AAPI expertise should be a core staff member for programs that serve large numbers of Asian-Americans and Pacific Islanders. Evaluators who have such expertise could be shared among various service agencies within the same city. Having a full-time evaluator on staff allows program evaluation feedback and brainstorming sessions by staff during the year; changes in programming can be made as needed instead of occurring at the end of the fiscal year.

It is important to develop bilingual and cultural teams to do translations and cultural interpretations and to act as cultural consultants across typical service boundaries (e.g., mental health, health, substance abuse, education, social services). Such teams could be sent throughout the city or county, and could be paid on a per-service basis, or where warranted by population density or cost-effectiveness, specialized units could be developed within an agency. Reimbursement policies should include language translation and cultural interpretation services.

One management strategy for substance abuse prevention programs is to use peers (matched by age, ethnicity, generation, gender, or social class) to collect respondent data and to work for prevention interventions. These workers should be paid or rewarded with recognition for service to their school, organization, or community.

Evaluations are often used to judge whether programs should be funded. Such funding threats should be lessened, and culturally competent evaluation should be used to improve substance abuse prevention programs. One way to decrease such threats is to lengthen the funding period for projects, so that problems can be identified and corrected without putting the substance abuse prevention program in jeopardy. Community change often takes a long time and is not well suited for short 3-year programs.

Future Research and Policy Issues

First, we need to mandate more longitudinal research to adequately test the efficacy of our prevention programs. Examining a microscopic slice of time—say change over 1 to 3 years—may

not give our interventions a fair evaluation. Lengthened funding time improves the ability of program staff to carefully craft an effective substance abuse program and to use evaluation as a tool to make periodic improvements.

It is time for a consensus conference on topics in substance abuse prevention research and evaluation in AAPI settings. The conference could address substance abuse research evaluation techniques, moderating variable instrumentation, sampling methodologies, and generation of meta-analysis articles on a specific topic each year. Such a consensus conference should be held every 5 years. The MacArthur Foundation model for generating innovative and exploratory research can be successful in the area of substance abuse prevention for ethnic/racial populations (Jessor, 1993). The lifespan developmental conferences held at the University of West Virginia in Morgantown is another successful model.

We also need to mandate that Federal agencies form technical assistance teams to assist demonstration projects in their evaluation processes. We need to broaden our evaluation techniques to include qualitative data, detailed process information, and contextual data to complement the quantitative data. We need more multivariate models of prediction to reflect the complexity of the topic by including modifiers, multiple protectors, and multiple risk factors in the equations. We need to focus on how lifespan developmental goals affect increasing vulnerability to high-risk behaviors at certain stages and during certain life experiences, and on relationships between such goals and the development of protective buffers or steeling factors.

We should include in our evaluations core demographic variables; at a minimum, these include age, gender, detailed ethnicity data, socioeconomic status, and substance abuse questions tailored to specific Asian-American and Pacific Islander groups. These core evaluation data could be augmented by adjustments, additions, or special modules that have been demonstrated to be better predictors for different ethnic, age, or gender groups of interest.

We can use the latest information technology to help tailor health promotion programs and their evaluations to meet the

varied needs and languages across AAPI populations. Ethnic, cultural, age, and gender differences can be programmed with interactive video to implement programs and collect evaluation data. Voice recognition (e.g., initial language recognition by computer) can be used to direct software to the appropriate linguistic branch. Multiple languages can be programmed into interactive computer programs to collect data or provide prevention materials to non-English-speaking respondents. Electronic transfer of data and pooling of these core data into a central data bank would provide a more "epidemiological" study of substance abuse data across many projects.

We need more collaborative research and prevention programming. Yu and Liu (1992) suggest several different strategies to improve epidemiological data sources in the field of Asian-American and Pacific Islander health. One excellent suggestion is to do intensive, large-scale health studies on Asian-American and Pacific Islander groups across the 10 States with 79 percent of the AAPI population of the United States, according to the 1990 census (California, New York, Hawai'i, Texas, Illinois, New Jersey, Washington, Virginia, Florida, and Massachusetts). Other excellent suggestions are to improve race/ethnic codes, decrease errors in ethnic coding, and oversample in national surveys.

The suggestions are made to stir our creative juices. We should take the opportunity to stretch our imaginations, change things that do not work, or change those things that have disappointed us and make this a better world. I know that this is possible. In my home State of Hawai'i, the importance of supporting the family is reflected in programs sponsored by State government because support for families was demanded by the people. Health care coverage is pooled on a statewide basis so that more people are covered by health insurance in Hawai'i than in most States. A direct benefit is that Hawai'i has one of the lowest rates of excess deaths in the country. Hawai'i can boast one of the longest life expectancies in the world. Housing laws (i.e., *Ohana* family laws) were changed to allow "granny flats" on single-family properties to meet the needs of multiple-generation families and alleviate a severe affordable-housing shortage. The implementation of

preschool and after-school programs with State subsidies and guaranteed care for even the poorest children give families support so that adults can work because someone is taking care of their children. Successful programs in Hawai'i have been culturally adapted from national programs or been specifically created to meet the needs of Hawai'i's ethnically diverse populations.

These very programs in Hawai'i are now being identified as model programs for the rest of the country. Yet much work must be done to decrease the risk for substance abuse and to improve the physical and mental health of native Hawaiians. Like other native peoples in the continental United States and Alaska, Native Hawaiians have been stripped of their beloved land (Trask, 1993). Several innovative programs, such as substance abuse prevention programs started by CSAP, have begun the healing process and the reconstruction of the Hawaiian culture from within the Hawaiian community. The Native Hawaiian Health Care Improvement Act of 1992 has spurred efforts to improve the health of Native Hawaiians, who suffer the poorest health status of any ethnic group in Hawai'i (Blaisdell, 1993). This process has given hope for the resurgence of a strong and vibrant Native Hawaiian people.

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5

Identifying At-Risk Asian-American Adolescents in Multiethnic Schools: Implications for Substance Abuse Prevention Interventions and Program Evaluation

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Editor's Note: *This chapter argues for a comprehensive approach to understanding the etiological factors that put Asian-American adolescents at risk for substance abuse. All groups and individuals exhibit strengths and weaknesses in dealing with risk. Yet, as a society, we typically focus on the weaknesses. Culturally competent providers and researchers must develop a holistic framework within which to view clients and health intervention outcomes.*

The author examines a segment of the Asian-American and Pacific Islander youth population that exhibits a lower-than-average rate of alcohol, tobacco, and drug use to facilitate our understanding of how resiliencies are developed for resisting substance abuse. Primary healthcare providers and researchers can use this knowledge to teach families how to nurture these resiliencies in their children and to develop community-wide

strategies that bolster these resiliencies in adolescents. Primary care professionals can thus help families counteract the negative influences of acculturation, while fostering health promotion and disease prevention.

Introduction

Designing and evaluating prevention interventions for ethnic-cultural groups requires a thorough understanding of *culture-specific* etiological risk factors for substance use (see Catalano et al., 1993; Kim, McLeod, & Shantezis, 1992; Maddahian, Newcomb, & Benter, 1988; Orlandi, 1986; Trimble, Bolek, & Niemcryk, 1992). Indeed, careful screening and selection of participants for prevention programs is pivotal to success in minimizing or reducing substance use and abuse among adolescents in our increasingly diverse schools (Gilchrist, 1991; Trickett & Birman, 1989).

Past research on the etiology of substance abuse has identified a number of risk factors for general populations (Dryfoos, 1990; Moncher, Holden, & Schinke, 1991), including low self-esteem (Kaplan, 1985), academic failure (e.g., Jessor, 1976), peer and parental influences (e.g., Brook, Brook, Gordon, Whiteman, & Cohen, 1990), and economically disadvantaged conditions (e.g., Lorion & Felner, 1986) (for a comprehensive review of the etiology of substance use among adolescents, see Dryfoos, 1990; Hawkins, Catalano, & Miller, 1992; Lorion, Bussell, & Goldberg, 1991). However, despite the increasing diversity and numbers of ethnic-cultural groups represented in our schools, few theoretical approaches are available to guide the implementation and evaluation of culturally relevant substance abuse prevention programs, especially with those adolescents who are often depicted as the problem-free "model minority" (i.e., Asian-Americans; Walsh, 1993). Thus far, most prevention models, such as problem behavior theory (Jessor & Jessor, 1977) and social learning theory, have failed to consider *extraindividual* factors (e.g., interaction of individuals in context; ethnic-cultural groups in school settings, such as Asian clubs), thus limiting the applicability of such models to adolescents in multiethnic or

multicultural contexts. Apparently, there is a lack of attention to the importance of ethnic-cultural individuals in context in addressing social issues such as substance abuse prevention (see Trickett & Birman, 1989).

As Trimble (1990–91) lamented regarding the current use of "ethnic glosses" (i.e., selection on the basis of ethnicity or race) by researchers, the majority of substance abuse prevention research with ethnic-cultural populations has been conducted with "at-risk" individuals. These individuals are identified on the basis of their membership in an ethnic-cultural category, not necessarily on the basis of any risk factors (see Sasao & Sue, 1993; Trimble, 1990–91). The exclusive use of ethnic group membership and the predominant view that it is a static as opposed to a dynamic variable may yield rigid and useless guidelines for substance abuse prevention programs because ethnicity/race variables per se are not amenable to intervention strategies (Gilchrist, 1991). Furthermore, when programs are designed for a particular ethnic-cultural group without regard to an understanding of multiple risk factors (e.g., individual-, family-, and school-level factors and interactions thereof), these programs tend to "blame the victim" (see Ryan, 1976) if such a "culturally anchored" approach does not fare well with certain subgroups of the ethnic-cultural group.

For example, most of the substance abuse prevention programs for Asian-American adolescents rely on school personnel to identify and refer potential participants. Identification of Asian-American adolescents at risk for substance abuse is usually based on individual risk factors derived from the model minority thesis (Sue & Morishima, 1982). Therefore, an Asian-American student who acts in a way contrary to what is expected—one who is too loud and outspoken, is disobedient, fails academically, or acts out—is considered a good candidate for a culturally anchored prevention program. On the other hand, an Asian-American adolescent who conforms to the model minority image may not be considered for prevention programs despite indicators that many such individuals later develop substance abuse or related problems (Masuda, Asian Pacific Family Center, personal communication, 1992).

Thus, the current model minority approach to identifying and selecting at-risk Asian-American adolescents for prevention programs is problematic. First, we know very little about the range of risk factors that predict future use and abuse of alcohol and drugs among ethnic-cultural youths (Trimble et al., 1992), especially Asian-American adolescents (Zane & Sasao, 1992). This lack of knowledge may lead to underidentification of potential participants who might benefit from prevention interventions, or overidentification of participants who could more appropriately be placed in treatment programs (e.g., adolescents who are already abusing alcohol or drugs and who have caught the attention of law enforcement officers). Second, the majority of prevention approaches (e.g., Botvin & Willis, 1985; Pentz, 1985) examine and emphasize the impact of *individual-level* risk factors as opposed to *ecological-contextual* factors. Maddahian et al. (1988) found that Asian-American college students who were low in religiosity and self-esteem experienced poor family relationships and were rated high on sensation-seeking tendencies (i.e., they were more likely to succumb to substance abuse). As noted previously, with an increasingly diverse multiethnic or multicultural adolescent population, an emphasis on individual-level factors may not be optimal; cross-cultural research indicates that psychosocial risk factors are *culture-bound* and *context-dependent* (see Jessor, 1992). For instance, Markus and Kitayama (1991) reviewed cultural influences on the concept of self and showed that Asian cultures tend to focus on the context in which the self is viewed (*interdependent self*) whereas non-Asian, Western cultures tend to focus on the *independent aspect of self*. Thus, even seemingly individual behaviors (e.g., decisions to experiment with alcohol) need to be understood in the social contexts in which they occur. Because of the increasing cultural and ethnic diversity in the United States, prevention researchers and practitioners must be able to focus on Asian-Americans in their multicultural or multiethnic contexts, such as schools and neighborhoods (Sasao & Sue, 1993). Furthermore even the effect of culture-bound factors, such as ethnic identity for Asian-Americans, need to be understood within the context of immigrant history and acculturation issues (Cheung, 1993).

Therefore, in order to optimize the effectiveness of culturally anchored prevention programs for Asian-American adolescents, we must understand and develop strategies for identifying at-risk Asian-American adolescents and expand our knowledge about the salience of contextual risk factors as well as individual-level psychosocial factors for alcohol and drug experimentation and use (see Bronfenbrenner, 1979; Kumpfer & Turner, 1990–91). Only then can we begin to develop an appropriate theoretical model to guide future prevention programming and evaluation efforts so that we do not have to rely on stereotypical identification of participants.

This chapter argues for the development of a comprehensive framework for understanding the etiology of substance use among Asian-American adolescents. It is based on an etiological study (Sasao, 1994) conducted in three multiethnic high schools in Southern California, where Asian-American and other adolescents share a multicultural context (i.e., school setting). The study examined the extent of substance use among students (mainly Asian-Americans and Mexican Americans) in the three high schools as a function of demographic, psychosocial, interpersonal, and contextual factors (e.g., intergroup relations). It was predicted that in addition to well-established effects of individual-level risk factors (e.g., gender, academic achievement), substance use among Asian-American adolescents would be significantly associated with other extraindividual factors such as school interethnic climate and attending different schools. Finally, a theoretical model is proposed that links individual-level and contextual-level risk factors for substance use among ethnic-cultural individuals and the implications of those factors for prevention interventions and evaluation.

The 1992 San Gabriel Valley High School Student Survey

Methodology

Overview

The 1992 San Gabriel Valley High School Student Survey (Sasao, 1994) was a districtwide survey of 9th through 12th grade stu-

dents in three high schools in the suburban region of Los Angeles (San Gabriel Valley). Alhambra City School District encompasses two cities, Alhambra and San Gabriel, where both Asian and Hispanic immigrant populations have dramatically increased in the past decade (United Way, 1992).[1] A total of 1,987 students were surveyed in 20 to 25 randomly selected classrooms at each school. The sample in the original survey consisted of 712 students (35.8 percent) from School A, 656 students (33.0 percent) from School B, and 619 students (31.5 percent) from School C. Four grade levels were distributed in proportion to the student statistics: 31.9 percent 9th graders, 27.8 percent 10th graders, 20.8 percent 11th graders, and 19.5 percent 12th graders. Overall, the gender distribution of the sample was approximately equal: 48.5 percent boys and 51.5 percent girls. All three schools were represented by a number of ethnic-cultural groups, the largest of which were Chinese, Vietnamese, and Hispanics (Chinese: school A, 35.1 percent; school B, 55.5 percent; school C, 40.4 percent; Vietnamese: school A, 12.4 percent; school B, 13.4 percent; school C, 10.0 percent; Hispanics: school A, 35.9 percent; school B, 18.9 percent; school C, 34.5 percent; Whites: school A, 5.4 percent; school B, 1.9 percent; school C, 4.0 percent; Others (including Mixed Heritage): school A, 11.2 percent; school B, 10.3 percent; school C, 11.1 percent). The percentage of foreign-born students was 69.9 percent (n=1,389); most were immigrants from Asian countries and Mexico. The demographics of the sample closely approximated those of all high school students in the San Gabriel Valley.[2]

Asian-American Students in the Sample

The focus of this study was a group of 953 students who identified themselves as Chinese (n=749) or Vietnamese (n=204). The 136 students from other Asian-American and Pacific Islander groups were classified as Other and were excluded from the analyses.[3] The distributions of gender and grade levels within each Asian-American group were almost proportional to those of the overall school statistics.

Survey Instrument

Data were collected via a 50-item self-report questionnaire whose items were based on questions about demographic information,

risk factors, and substance use taken from existing surveys (e.g., the Monitoring the Future Survey, Johnston, O'Malley, & Bachman, 1989; the Effectiveness School Survey, Gottfredson, 1986). Selection of risk factors was based on the extant literature on risk factors for substance use and related problems (e.g., Hawkins et al., 1992). The survey contained four sections: (a) sociodemographic information, (b) psychosocial risk factors, (c) interpersonal factors, and (d) ecological-contextual factors. Sociodemographic information included race/ethnicity, age, gender, grade level, place of birth (U.S.-born vs. foreign-born), living with both parents or not, and English language as a primary language at home. Four psychosocial risk factors were (1) subjective well-being (constructed as a composite of several questions on psychological and physical well-being, eating habits, sleep routines, exercise habits, and general happiness); (2) ethnic identification (a composite index based on five items selected from the Multigroup Ethnic Identity Measure [Phinney, 1989], including items about the individual's perception of belonging to his or her ethnic group and ethnic pride in that group); (3) self-esteem (the 10-item Rosenberg Self-Esteem Scale [Rosenberg, 1965], focusing on the individual's perception of self-worth, self-respect, and self-pride, with four response alternatives: strongly agree, agree, disagree, and strongly disagree); and (4) sense of fit on campus (a single item asking if students feel they fit well with people of their own age on campus). Two indices of interpersonal influences on substance use were extent of parental anger if respondents used alcohol or drugs (1 = not at all angry, 4 = very angry) and degree of peer disapproval if respondents used alcohol or drugs (1 = strongly approve, 4 = strongly disapprove). With respect to ecological-contextual factors, a single composite index was constructed to assess perceived interethnic climate on campus with three items assessing possible ethnic tensions in the schools, the degree of other students' negative feelings toward the respondent's ingroup members, and the degree of the respondent's negative feelings toward other students on campus.

Substance abuse and experimentation were assessed by asking whether the students had tried "gateway drugs" (cigarettes, alcohol, and marijuana) ever in their lifetime and whether they had used cigarettes and alcohol within the previous 30 days or marijuana within the previous 12 months. Because of the highly

skewed distributions of these substance use indices, they were all dichotomized prior to analysis. Additional items were included to assess self-reported use of drugs such as cocaine and hallucinogens, but these were excluded from the analysis because of low frequency of use in the survey sample.

Findings

Mean Prevalence of Substance Abuse

Table 5.1 summarizes mean prevalence of gateway drug use by ethnic group. Between-group differences for each substance were tested with a one-way analysis of variance (ANOVA). Both Chinese and Vietnamese students had significantly lower use of cigarettes than did Hispanic, Whites, and Other students. However, Vietnamese students who had smoked cigarettes at least once were likely to report a higher 30-day use than were Chinese, Hispanic, or White students. Like cigarette use, lifetime use of alcohol was lowest among Chinese and Vietnamese students, while Hispanics and Whites had substantially higher levels of use. Likewise, the patterns of alcohol use in the past 30 days were very similar to those of lifetime use. When asked if they ever used marijuana in their lifetime, all of the Asian students indicated substantially lower prevalence rates than the other groups, and again, the two Asian groups had the lowest prevalence of marijuana use. Interestingly, however, the prevalence for 12-month use of marijuana among Vietnamese students was significantly higher than that of Chinese students and was almost equal to those of other ethnic-cultural groups.

Additionally, school differences were tested via a one-way ANOVA on each of the substances used. Although no significant differences were found, school C had slightly higher percentages than schools A and B in terms of lifetime cigarette and alcohol use ($p < .07$). No other comparisons yielded significant differences across the three schools.

Overall Substance Use Index

Because high school may represent the most vulnerable and unstable period of life, experimentation or use of only one substance

Table 5.1. Prevalence of substance use among students, San Gabriel Valley High School, 1992, by ethnic group

	Ethnic Group									
	Chinese (*n*=749)		Vietnamese (*n*=204)		Hispanic (*n*=519)		White (*n*=66)		Other (*n*=433)	
	Mean (Standard Deviation)	*n*[a]	Mean (Standard Deviation)	*n*[a]	Mean (Standard Deviation)	*n*[a]	Mean (Standard Deviation)	*n*[a]	Mean (Standard Deviation)	*n*[a]
Cigarettes or tobacco										
Lifetime	.24[a] (.42)	749	.23[a] (.42)	204	.54[b] (.50)	513	.44[b] (.50)	66	.42[b] (.49)	433
Previous 30 days	.29[a] (.45)	174	.45[b] (.50)	49	.35[a] (.48)	277	.24[a] (.44)	29	.39[b] (.49)	186
Alcohol										
Lifetime	.37[a] (.48)	746	.28[a] (.45)	204	.66[b] (.47)	517	.68[b] (.47)	66	.57[b] (.49)	431
Previous 30 days	.28[a] (.45)	283	.24[a] (.43)	58	.59[b] (.49)	339	.36[b] (.48)	45	.45[b] (.50)	248
Marijuana										
Lifetime	.03[a] (.17)	744	.06[a] (.24)	204	.23[b] (.42)	513	.18[b] (.39)	66	.16[b] (.37)	430
Previous 12 months	.47[a] (.51)	42	.67[b] (.49)	15	.78[b] (.42)	126	.67[b] (.49)	12	.77[b] (.43)	77

[a]Sample size used to calculate means.

may simply be a manifestation of this instability (Seifert & Hoffnung, 1987). Therefore, as a more stable predictor of substance abuse, an overall index was created by summing over three dichotomous indices of gateway drugs (cigarettes, alcohol, and marijuana). The index ranged from 0 (no drug use) to 3 (lifetime use of all three substances). Moreover, it was desirable to use this index, rather than specific substance use items, to identify adolescents who would be most likely to benefit from prevention interventions in a cost-efficient manner. Table 5.2 presents the means and standard deviations of the index by ethnic groups. As expected, Chinese and Vietnamese students reported the lowest level of overall drug use. Hispanic students reported the highest level, followed by Whites and Other.

Table 5.2. Substance use index scores for students, San Gabriel Valley High School, 1992, by ethnic group

	Ethnic Group					
	Chinese (*n*=735)	**Vietnamese (*n*=201)**	**Hispanic (*n*=508)**	**White (*n*=66)**	**Other (*n*=365)**	**Total (*n*=1,875)**
Mean	.64[a]	.56[a]	1.44[b]	1.30[b]	1.14[c]	.97
(Standard Deviation)	(.85)	(.89)	(1.12)	(1.08)	(1.10)	(1.05)

Note. Substance use index scores ranged from 0 (no substance use) to 3 (lifetime use of cigarettes, alcohol, and marijuana). Differences among means with different superscripts (a, b, or c) are statistically significant at the 5 percent significance level.

Identifying Asian-American Adolescents at Risk for Substance Abuse: A Hierarchical Regression Analysis

To assess the contributions of various risk factors for substance abuse among Asian-American students in the sample, a hierarchical multiple regression was used. Table 5.3 displays the results of regressing the overall substance use index on four sets of risk factors: (1) demographic factors (Chinese ethnicity, male gender, foreign-born status, no intact family, and English not a primary language used at home); (2) psychosocial factors (low subjective well-being, low ethnic identification, low self-esteem, and no sense of fit on campus); (3) interpersonal influence factors (degree of parental anger and peer disapproval if alcohol or drugs were used); and (4) contextual factors (two dummy variables representing three schools, and an interethnic climate in-

dex). Each of these sets was entered sequentially into the regression equation, and the overall adjusted R^2 after entry of all variables was .17 ($p < .01$).

Table 5.3. Hierarchical regression of substance use index on risk factors among Chinese and Vietnamese students, San Gabriel Valley High School, 1992

Risk factor	β	ΔR^2	R^2
Step 1: Demographic factors			
Ethnicity (1=Chinese)	.025		
Gender (1=Male)	.103***		
Low grade point average	−.113***		
Foreign-born status	−.083**		
No intact family	.062*		
No English at home	−.141	.09***	.09
Step 2: Psychosocial factors			
Subjective well-being	.089***		
Ethnic identification	.005		
Self-esteem	.039		
No sense of fit	−.029	.01	.10
Step 3: Interpersonal factors			
Parent anger at substance use	−.106***		
Peer disapproval of substance use	−.192***	.05***	.15
Step 4: Contextual factors			
School A	−.089**		
School B	−.096**		
Interethnic climate	.11**	.02**	.17

Note. *$p < .10$; **$p < .05$; ***$p < .01$.

R^2 change (ΔR^2) after each step was statistically significant, with the exception of step 2 (psychosocial factors): step 1 (demographic factors), $\Delta R^2 = .09$, $p < .01$; step 2 (psychosocial factors), $\Delta R^2 = .01$, n.s.; step 3 (interpersonal factors), $\Delta R^2 = .05$, $p < .01$; and step 4 (contextual factors), $\Delta R^2 = .02$, $p < .05$. An examination of individual risk factors in the regression equation showed that experimentation and use among Asian-Americans can be explained by commonly known risk factors such as male gender ($\beta = -.103$, $p < .01$) and poor academic achievement ($\beta = -.113$, $p < .01$).

The marginal significance of not living with both parents as a proxy index of no intact family lent support to the finding that family structure is a less important correlate of substance use than is attachment to parents (e.g., Hawkins et al., 1992). However, contrary to our usual assumption that new immigrant populations experience migration distress because of lack of social and tangible resources (Berry & Kim, 1988), two individual-level risk factors did contribute to the equation, but in the other direction: foreign-born status, $\beta = -.083$, $p < .05$, and English not as a primary language at home, $\beta = -.141$, $p < .01$. This means that foreign-born Asian-American students tended to report *less* substance use than those who were American-born, and also that the use of English at home is not necessarily a risk factor for substance use.

This pattern of findings suggests at least two interpretations of the patterns found among the "acculturative" indices. First, these demographic factors often used as an index of acculturation may act as buffers or resiliency factors against psychosocial stress and may provide a shield against the volatile norm about drug use that may exist on many school campuses. In other words, these students may not have caught up with the pro-drug message in the campus ecology. Second, Asian adolescents from immigrant families tend to struggle with their language as well as with their academic pursuits, which is likely to promote more conservative attitudes and behaviors with regard to substance experimentation and use. Therefore, in recruiting potential participants for prevention programs, it should be kept in mind that these acculturative factors may not lead to substance use or nonuse. Rather, the impact of acculturation clearly needs to be reexamined before we can reliably establish the relationship between acculturation and substance abuse or other related problems (see Sasao & Chang, 1994).

At step 2, although one of the psychosocial factors (an index of subjective well-being) significantly contributed to the equation ($\beta = .089$, $p < .01$), the overall contribution of this risk factor set was minimal, as judged by a ΔR^2 of .01 (n.s.). Surprisingly, the impact of ethnic identification on substance use was not significant ($\beta = .005$, n.s.), although most culturally anchored preven-

tion programs tend to stress the importance of adolescents' identification with their own cultural heritage as an important resiliency factor. Neither of the other psychosocial factors—self-esteem and sense of fit on campus—was significant ($\beta = .039$, n.s., and $\beta = -.029$, n.s., respectively).

The effects of both parental and peer influences at step 3 were consistent with the empirical literature on etiological factors (e.g., Newcomb & Bentler, 1989; Oetting & Beauvais, 1986). Asian-American adolescents in the sample were likely to report less experimentation and use if their parents become angry when they used alcohol or drugs ($\beta = -.106$, $p < .01$). Similarly, strong peer disapproval tended to discourage use ($\beta = -.192$, $p < .01$), again supporting existing empirical evidence (see Newcomb & Bentler, 1989).

In step 4, two dummy variables representing three high schools and an interethnic climate index were entered. The addition of both schools to the regression equation, with school C as the reference school, was significant, indicating that school C appeared to be higher in substance experimentation and use among its student body. Also, a positive effect of interethnic climate index ($\beta = .11$, $p < .01$) showed that the perception of increased tensions among ethnic groups contributed to the higher level of substance experimentation and use among Chinese and Vietnamese students. This was also confirmed in a series of focus group discussions held on each campus prior to the survey; the majority of focus group participants, even Asian-American students who often perceive intergroup conflict as that between Hispanics and other ethnic groups, stressed the importance of intergroup harmony on campus in leading to "fewer problems" (see Sasao, 1994, for a summary of focus group discussions; see Markus & Kitayama, 1991).

Identifying 'At-Risk' Asian-American Adolescents

The findings of this survey also indicate that although Asian-American high school students tend to report less substance use than students of other ethnic-cultural backgrounds, those

identifying and selecting potential Asian-American adolescents who are potential substance users for prevention programs must proceed carefully by considering not only commonly known individual-level risk factors but extra-individual risk factors as well. We know that immigrant adolescents such as Asian-American youths face a number of developmental challenges, as do any other adolescents in the United States, even to the point of engaging in health-compromising behaviors including substance use, violence, and unsafe sexual behaviors. In spite of these concerns and the costs associated with adolescent substance use and abuse, prevention researchers and practitioners have paid insufficient attention to the identification of at-risk individuals for their prevention programs (see Gilchrist, 1991), particularly among underrepresented populations.

The present study has several implications for prevention strategies and evaluation, especially concerning identification and selection of Asian-American adolescents for prevention programs. Specifically, two interrelated issues are discussed here: (1) the difficulty of defining risk for Asian-American adolescents and (2) potential iatrogenic effects of prevention programs among Asian-American adolescents in multiethnic schools.

Difficulty in Defining 'Risk' for Asian-American Adolescents

The ability to predict which adolescents are likely to become alcohol or drug users has been an important concern for prevention practitioners because of the rising costs of prevention efforts in schools and organizations. Although past etiological research indicates that substance use is not a single-pathway problem, but has multiple pathways leading adolescents to experimentation and use (Jessor, 1992), no satisfactory criteria have been established for assessing risk among adolescents or for identifying participants who are likely to benefit most from prevention programs. In the absence of such etiological information, many community-based and school-based preventionists look for idiosyncratic and individualistic factors (e.g., skin color, language, ethnic identification, self-esteem) that conveniently distinguish Asian-American adoles-

cents from "mainstream" students. Thus, all Asian-American adolescents, whether their parents are recent immigrants or not, become eligible for prevention interventions. Given the lack of adequate evaluation in current prevention programs for Asian-Americans, it is extremely difficult to assess the effectiveness of such programs. The situation is further complicated by the fact that some prevention programs in the Asian-American community suffer from inappropriate program content or a mismatch between Asian-American adolescents' needs and program staff's competencies. To enhance the identification of Asian-American adolescents for prevention interventions, research efforts must be expended to develop a theoretical framework in which the concept of risk is defined not only in terms of precipitating individual-level factors (e.g., low self-esteem, low identification with own ingroup), but also in terms of the larger ecological contexts (i.e., schools and neighborhoods).

As shown in the regression analysis, in addition to the amount of variance attributable to intraindividual risk factors (such as gender, grade point average, English not as a primary language at home), a significant amount of variance was explained by extraindividual risk factors (e.g., perceived interethnic climate on campus). The social-psychological process in which this macro-level variable relates to actual substance use needs to be further investigated in future research. Also, more attention must be paid to the role of multicultural contexts shared by a number of ethnic-cultural groups. There is a clear need to integrate micro- and macro-level factors in identifying and recruiting potential substance abusers.

Iatrogenic Effects of Prevention Programs Among Asian-American Adolescents

Overlooked iatrogenic effects of prevention interventions, defined as undesirable and unintended consequences (e.g., lowered self-esteem, heightened level of substance use), may play a role for Asian-American youths who participate in prevention programs. Iatrogenic effects are clearly a synergistic function of characteristics of recruited participants and programmatic emphases.

For example, Asian-American adolescents may feel resentful and disappointed after participating in a prevention program for several reasons. The program may incorporate incorrect assumptions about participants' level of English language skills, or it may pay inappropriate attention to cultural values based on a stereotypic understanding of Asian (not Asian-American) cultures. Students may be concerned about being labeled after they have been pulled out of the classroom to participate in a substance abuse prevention program. Therefore, it is important to consider some creative methods of identifying participants and implementing programs to avoid iatrogenic effects resulting from the use of ethnic glosses (Trimble, 1990–91) (i.e., selecting participants because of their ethnicity or race). Such iatrogenic effects may be psychologically devastating in ethnically or culturally heterogeneous campus settings. For Asian-Americans, in the context of the model minority myth, being recruited for a substance abuse prevention intervention may be a publicly stigmatizing experience because of concerns about loss of face (Markus & Kitayama, 1991) within their own Asian-American student groups as well as across other groups on campus. Under these circumstances, we might begin addressing the effects of the interethnic campus climate not only for Asian-Americans, but also for others in the same ecological context. Thus, participants in prevention programs must be "sufficiently at risk" to justify their inclusion in such programs.

Toward an Integrative Framework for Identifying At-Risk Ethnic-Cultural Adolescents for Prevention Interventions

What is the next step toward developing theory-based identification and screening for Asian-American and other ethnic-cultural adolescents in today's multiethnic schools? This section describes a working and generative research model (Sasao & Chang, 1994) that incorporates both individual-level and systems-level variables that may be amenable to community interventions to promote well-being of individuals in multiethnic or multicultural contexts.

The foregoing discussion clearly indicates that to advance our understanding of etiological factors for substance use among adolescents, we must take into account that substance use is a socially and culturally complex issue encompassing both individual- and community-level influences; we must go beyond ethnic glosses in examining culture-relevant factors that promote or inhibit substance use. More specifically, future efforts in etiological research must focus on those mediating variables that are modifiable and amenable to prevention interventions while recognizing the possibility of iatrogenic effects.

Figure 5.1 represents a preliminary research model depicting the impact of ethnic-cultural diversity on our quality of life (Sasao & Chang, 1994). It is based on several social and community psychological theories (e.g., Rappaport, 1987; Tajfel & Turner, 1986; Turner, 1987). A basic assumption among cognitively oriented social psychologists (e.g., Fiske & Taylor, 1984) is that we expend a considerable amount of energy categorizing incoming social information. To simplify such a complex task, we tend to rely on heuristic judgments or rules of thumb to form group representations in our minds (e.g., Tversky & Kahneman, 1974). As can be expected, the more clear-cut and concrete our information is, the easier it is for us to form these representations and vice versa. How does this explain the phenomenon of ethnic-cultural diversity? The general notion is that the more homogeneous a population is perceived to be, the more difficult it is for us to form distinct group categorizations or even realize that such categorizations exist within that population. On the other hand, the more heterogeneous a population is perceived to be, the easier it is to discern category memberships within that population. Under conditions of diversity, we have many convenient bits of group-criterion information or "marker variables" at our disposal: skin color, cultural traditions, ethnic food, language, and customs.

Thus, an important social-psychological consequence of ethnic-cultural diversity is the increased salience of group membership among individuals. This heightened awareness of group membership manifests itself across two social-psychological dimensions: at the micro and macro levels.

The *micro or individual* level, which constitutes the theoretical backbone of most prevention models (cf. Gilchrist, 1991), involves social-cognitive processes such as intergroup discrimination, perception of outgroup homogeneity, and salience of ethnic identification. Although this individual level accounts for and explains many risk factors, psychological maladjustments and dysfunctions, and consequent behaviors, by no means does it provide us with a complete picture of individuals at risk for substance abuse.

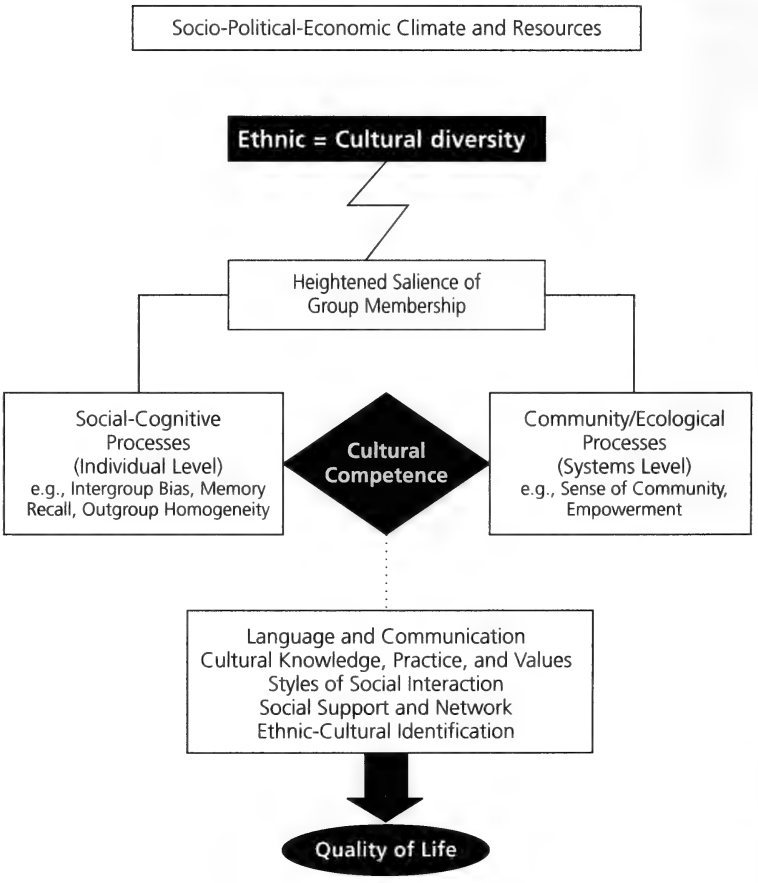

Figure 5.1—Ethnic-cultural diversity and quality of life: Toward a social-community psychological model.

Source: Sasao & Chang (1994).

Inattention by most prevention researchers and practitioners has been at the *macro* or *systems* level. The systems level involves community and ecological processes such as the sense of community, empowerment, and community cohesion. Perhaps part of the reason for inadequate research at the systems level is that this level has been extremely difficult to make operational, both conceptually and methodologically, in research. Paradoxically, this lack of research occurs at a time when we are fast becoming ethnically, culturally, and ideologically diverse, especially in our schools, where children and adolescents spend most of their time during their formative years after immigration.

Clearly, a model that considers only the micro level or only the macro level is inadequate for determining an individual's quality of life or coping ability. To conceptually consider micro- and macro-level influences, we propose the idea of *cultural competence*. We define cultural competence as a set of beliefs, attitudes, values, abilities, and skills that enable individuals to adaptively function in a multicultural environment. The notion of cultural competence accounts for and encompasses interdependence of the individual- and systems-level processes. Although the notion of cultural competence is fairly straightforward under conditions of homogeneity (learn one language, tolerate those who are like yourself, adhere to one set of customs and one culture), conditions of ethnic-cultural heterogeneity greatly complicate the matter. In a multicultural context, the task of becoming culturally competent or proficient is exceedingly complex because we must constantly monitor and adjust our behavior and perceptions depending on the cultural context. Thus, the concept of cultural competence operates not on a single continuum (cultural incompetence at one end and cultural competence at the other), but rather on orthogonal geometry. For instance, one may achieve flawless competence in one culture and stumble in another. It is possible to have varying degrees of proficiency in different cultures.

My colleague and I (Sasao & Chang, 1994) have conceptualized cultural competence as a construct with five dimensions: (1) language and communication; (2) cultural knowledge, practice, and values; (3) styles of social interaction; (4) social support and network; and (5) ethnic-cultural identification. Within each

dimension, there are three domains or levels: affective (emotional), cognitive, and behavioral. We assert that even within one culture, the notion of cultural competence is orthogonal. For instance, an individual may be very proficient linguistically (high behavioral level) and possess a good understanding of cultural practices and values (high cognitive level), yet feel extremely uncomfortable when interacting with other members of the cultural group (low affective level).

We argue that to develop a conceptual understanding of etiological factors for substance use among Asian-American youth, we ought to investigate the intricate social-community psychological processes in which cultural adaptation occurs for these youth in the midst of cultural transition. A psychometric scale assessing the notion of cultural competence, as presented here, is being developed for various Asian-American populations. When the proposed model is applied specifically to substance abuse prevention among Asian-American adolescents in multicultural school settings, it may provide an innovative new intervention strategy. Prevention programs need not be based on traditional "ethnic markers" (e.g., language, skin color) but focus on those variables that could be used in prevention interventions with students of various cultural backgrounds to promote cultural competence skills and opportunities. In the proposed model, substance experimentation and use can be considered as barriers to the development of cultural competence in adolescents.

Conclusions

Identifying at-risk Asian-American adolescents in multiethnic settings is difficult for both prevention researchers and practitioners because the concept of risk has been blurred by our traditional emphasis on individual-level risk factors, including psychosocial and "acculturative" risks, and relative neglect of systems-level or context-dependent factors, such as interethnic climate and school setting. As this chapter attempts to demonstrate, the identification and selection of Asian-American adolescents to participate in substance abuse prevention programs must be determined by a multiplicity of factors incorporating both levels of risk factors.

Author's Notes

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Endnotes

1. According to the 1990 U.S. Census, the city of Alhambra had a total population of 82,106. The ethnic breakdown was 40.9 percent White, 36.1 percent Hispanic Origin, 38.1 percent Asian and Pacific Islander, 2.0 percent African American, 0.4 percent American Indian, and 18.6 percent Other Races. The population for the city of San Gabriel was 37,120, with an ethnic composition of 48.1 percent White, 36.3 percent Hispanic Origin, 32.5 percent Asian and Pacific Islander, 1.1 percent African American, 0.5 percent American Indian, and 18.1 percent Other Races. The median income levels for Alhambra and San Gabriel were $31,368 and $32,559, respectively.

2. In 1991, school A's student population of 3,302 students was 43.6 percent Asian-American, 44.1 percent Hispanic, 0.1 percent African American, 11.2 percent White, and 0.1 percent Other Races. School B's student population of 2,740 was 63.3 percent Asian-American, 32.2 percent Hispanic, 0.4 percent African American, 4.0 percent White, and 0.1 percent Other Races. Of the 3,564 students at school C, 53.4 percent were Asian-American, 35.1 percent Hispanic, 0.8 percent African American, 10.6 percent White, and 0.1 percent Other Races.
3. Other Asian-American and Pacific Islander groups included 14 Cambodians, 19 Filipinos, 3 Native Hawaiians, 44 Japanese, 19 Koreans, 3 Laotians, 1 Samoan, and 33 Asians of unknown ethnicity.

6

Current Evidence on Substance Abuse Among Asian-American Youth

Gregory A. Austin, Ph.D.

Editor's Note: *In this chapter, the author uses current research on substance use among Asian-American and Pacific Islander students in grades 7 and 9 to develop a profile of abuse among adolescents in specific AAPI ethnic populations. AAPI adolescents are at higher risk for substance abuse than are older members of their ethnic groups. Drinking, smoking, and abusing other legal substances may be these adolescents' way of coping with the stress of racism, acculturation, and normal adolescent issues. Although AAPI students report a lower overall frequency of drinking, intermittent binge drinking, which has life-threatening health consequences, is a problem among some ethnic groups, as is tobacco use.*

Often, primary health care providers are the only health professionals that Asian-American and Pacific Islander adolescents and their families have contact with. Therefore, the challenge for these professionals is to help families circumvent some of the negative health consequences of acculturation by targeting the problem substances and the social contexts in which they are used.

Introduction

The population of Asian-Americans and Pacific Islanders in this country has grown markedly over the past decades in both size

and diversity. Asian-Americans, nearly half of whom are foreign-born, are now the fastest growing ethnic group in the United States. Between 1980 and 1988, their number increased by 76 percent, compared with 36 percent for Hispanics. Even more important, Asians now constitute a substantial proportion of the population in many areas of the country. Almost two-thirds of them live in three States: California (35 percent), Hawai'i (16 percent), and New York (9 percent). In Hawai'i, they make up 61 percent of the population. In California, their numbers grew so fast during the 1980s that they are now the State's third largest ethnic group, constituting 10 percent of the State's population, a 127 percent increase since 1980. During the same period, twofold or threefold increases in the Asian-American population were reported in the States of Washington, New York, New Jersey, Virginia, and Texas, to about 4 percent of each State. In some schools in California, Asians are the largest single ethnic group of students.

Very little information is currently available to help these schools and communities develop effective programs to prevent abuse of alcohol, tobacco, and drugs among Asian-American youth. Such information is sadly lacking for all ethnic/racial groups (Austin & Gilbert, 1989; Austin, Prendergast, & Lee, 1989; Prendergast, Austin, Maton, and Baker, 1989; Trimble, Padilla, & Bell, 1987). However, Asians are the most underresearched group of all, and what research has been conducted has largely been limited to alcohol drinking among Chinese- and Japanese-American adults. For youth, the three major sources of information on national alcohol, tobacco, and drug use—the National Household Survey on Drug Abuse, the National High School Seniors (Monitoring the Future) Survey (NSS), and the Youth Risk Behavior Survey—all exclude Asians in the ethnic comparisons in their regular reports.[1] Particularly negligible is our knowledge about the effectiveness of prevention programs targeting Asian-Americans. In a review of 133 program evaluations published between 1980 and 1992, only two reported any results on Asians (Graham, Johnson, Hansen, Flay, & Gee, 1990; Hansen, Malotte, & Fielding, 1988).

The number of State and local epidemiological surveys with Asian-American adolescent samples has grown in recent years

(see table 6.1). Several of these studies begin to provide a foundation for understanding how use among Asian-Americans compares with that of other ethnic groups. These include the 1983 and 1990 New York State surveys of secondary students (Barnes & Welte, 1986; Barnes, Welte, & Dintcheff, 1993; New York, 1991; Welte & Barnes, 1987); analyses conducted by Moor, Elder, Young, and Wildey (1989), and Ellickson, Hays, and Bell (1992) of evaluation data from the ALERT prevention program (n=400); and the survey of secondary students (n=215) in Mecklenburg County, North Carolina, conducted by Kim, McLeod, and Shantzis (1992). Reflecting the increase in the size of the Asian-American population in New York, the proportion of Asian-American respondents in the New York State survey doubled between 1983 and 1990 (from 2 percent to 4 percent). Bachman et al. (1991) conducted a comparison of ethnic group results from the 1985–89 National High School Seniors Survey, an important contribution to our knowledge of ethnic differences in substance use, especially for Asian-Americans.

Overall, even the existing body of epidemiological research is of very limited value. First, most of the studies are based on small numbers of Asian-American respondents (i.e., ranging from 60 to fewer than 125 students and averaging 2 to 3 percent of the total survey sample (see table 6.1). This small sample size raises questions about the validity of the findings (Sasao, 1992). For example, in a study of smokeless tobacco use among 4,249 ninth graders in the Twin Cities metropolitan area, Murray and Roche (1988) conducted ethnic comparisons with a sample of 90 Asian-Americans, 3,309 Whites, and 449 African Americans. A similar disparity in ethnic group sample sizes occurred in the 1988 Alaska State survey, which included only 113 Asian-Americans and Pacific Islanders (3 percent) in a total sample of 3,563. This disparity is especially problematic for studies dealing with illicit drugs because they have lower prevalence rates across all groups.

Second, gender differences have been almost completely ignored, with one important exception—the NSS analysis conducted by Bachman et al. (1991). This problem appears to be related to the small sample sizes, which preclude subgroup analysis. Similarly, the small sample size of Asians in most multiethnic studies

Table 6.1. Student surveys with Asian samples

Study	Location	Date	Grade	Total Sample	Asian Sample		Substance
Bachman et al., 1992	National	1985–89	12	73,527	1,899	(3%)	All
Barnes & Welte, 1986	New York	1988	7–12	27,335	524	(2%)	Alcohol
Barnes et al., 1990	New York	1990	7–12	23,860	1,066	(4%)	Alcohol
Ellickson et al., 1992	California, Oregon	1984–88	7–10	4,143	410	(10%)	All
Gillmore et al., 1990	Seattle	1985–86	5	778	171	(22%)	All
Kim et al., 1992	Mecklenburg, NC	1989	7–12	6,778	215	(3%)	All
Maddahian et al., 1986	Los Angeles	1980	10–12	847	65	(8%)	All
Maddahian et al., 1988	Los Angeles	1979	10–12	994	71	(7%)	All
Moor et al., 1989	San Diego	1988	4, 7, 10, 12	5,000	500	(10%)	Tobacco
Murray et al., 1987	Twin Cities, MN	1983	7	4,599	80	(2%)	All
Murray et al., 1988	Twin Cities, MN	1983	9	4,249	90	(2%)	Tobacco
Newcomb et al., 1987	Ventura, CA	1985	7, 9, 11	2,926	77	(3%)	All
New York, 1991	New York	1990	7–12	23,860	1,066	(4%)	All
Segal, 1992	Alaska	1988	7–12	3,563	113	(3%)	All
Welte & Barnes, 1987	New York	1983	7–12	27,335	524	(2%)	All

has especially limited our knowledge about gender differences. For example, Murray and Roche (1988) had to eliminate Asian-Americans from their analyses of gender differences across ethnic groups in smokeless tobacco use because the total sample of Asian-Americans was only 90.

Third, a major limitation of all past research involving Asian-American drug use has been the tendency to lump diverse nationalities into a single "Asian-American" category, or else to generalize the findings derived from one Asian-American group (generally Chinese- or Japanese-American) to all others. This practice ignores significant differences among Asian-American groups and "tends to confuse the already lamentable state of research on this topic" (Yu & Liu, 1987, p. 14). Within the broad designation "Asian-American and Pacific Islander," there are at least 32 different national and ethnic groups; there may be more than 60 if subgroups are included.[2]

These groups are very heterogeneous. They differ markedly in their traditional cultures, customs, and values, as well as in their histories in the United States and in the degree to which they are acculturated and assimilated into White-American culture. Given this diversity, it must not be assumed that there is homogeneity in substance use and abuse among different Asian-American and Pacific Islander populations (Kim et al., 1992; Trimble et al., 1987).

The limited group-specific research that has been conducted has established that among adults, there are significant differences in drinking among the Chinese, Japanese, Koreans, and Filipino Americans.[3] One of the few surveys to examine group differences in adolescents was the 1987 Hawai'i Student Survey. That survey found that significant group differences existed and that substance use among some Asian-American groups approached that of Whites. Among 12th graders, Native Hawaiian/Part Native Hawaiian students reported the highest prevalence of alcohol use (91 percent), the same rate as Whites. Filipinos reported the lowest drinking rate (81 percent), and Japanese and Mixed students fell between. The rate of heavy drinking was highest among Native Hawaiian/Part Native Hawaiian students (66 percent), fol-

lowed by White and Mixed students; it was lowest (40 percent) among Filipino and Japanese students (Anderson & Deck, 1987).[4]

Confounding this issue of subgroup differences is the influence of geography. Even within specific Asian-American groups, drinking may differ significantly by location. A survey of Japanese-American adults in 1984 found a higher level of abstinence among men in Oahu (21 percent) and Santa Clara (19 percent) than in Los Angeles (14 percent). The level of heavy drinking in Oahu (29 percent) was somewhat less than in Los Angeles (36 percent), but more than double that in Santa Clara (13 percent). Similar site variations were found for women (Kitano, Chi, Law, Lubben, & Rhee, 1988). In addition, it has been observed that research on Asian-Americans in Hawai'i has little relevance for understanding use among continental Asian-Americans. Hawaiian-Asian-American groups are quite different owing to their large numbers and the length of time they have resided on the islands (Kitano, Chi, et al., 1988). Thus, prevention program evaluations need to examine a program's behavioral effects within the context of the local situation.

This evidence suggests that research on Asian youth that was conducted before recent years is of little value because not only has the Asian-American population grown in size, but its composition has changed dramatically. Through the 1970s, Japanese and Chinese Americans constituted the largest groups. Now Filipino Americans, Korean Americans, and Southeast Asian-Americans, especially Vietnamese Americans, are the fastest growing groups. It is estimated that by the year 2000 Filipino Americans will be the largest group, followed in order by the Chinese Americans, Vietnamese Americans, Korean Americans, and Japanese Americans.

In particular, we know very little about the newest, fastest growing populations. Only a few studies have included Southeast Asian-American populations (Morgan, Wingard, & Felice, 1984; Yee & Thu, 1987). Similarly, knowledge about substance use among Filipino Americans, soon to be the largest Asian-American population in the United States, is almost negligible. It is essential to collect good baseline data on consumption attitudes, behaviors, and problems among the new immigrant population in order to examine how acculturation and the passage of time affect

these variables. Furthermore, these new immigrant populations may be at higher risk than traditional Asian-American groups, as discussed below.

For the most part, the dearth of information can be attributed to the low prevalence of Asians nationally (still less than 3 percent of the total U.S. population) and in most locales. However, an equally important factor may be that Asians have long had the reputation of being "the model minority," with very low rates of substance use. Because of this belief, there has been a tendency to discount the need to research Asian-American populations or to develop prevention programs targeting them (Trimble et al., 1987). However, several questions have been raised about the applicability of this model to the current generation of young Asian-Americans.

First, many assumptions about low levels of substance use among Asian-Americans have been drawn from out-of-date research and research only on drinking among Chinese-American and Japanese-American adults. These results are not necessarily generalizable to other Asian groups or to today's population of Asian-American youth.

Second, even for adults, clinical and anecdotal reports suggest that substance abuse problems have been underestimated among at least some Asian-American groups (Nakashima, 1986; Zane & Sasao, 1992). The 1981 Asian Drinking Survey in California indicated that among male drinkers the rate of heavy drinking was as high as 29 percent among Japanese Americans and Filipino Americans and 26 percent among Korean Americans. These rates were consistent with those of men in the general U.S. population (Chi, Lubben, & Kitano, 1989).[5] In some groups, for example, Korean Americans, it appears that high levels of heavy drinking occur with high levels of abstinence. That is, prevalence rates remain relatively low overall, but drinking is heavy among those who do drink.[6] Research in Hawai'i has found that Native Hawaiians and Filipino Americans consume more than Whites and that consumption scores of Japanese were twice as high as those of Chinese. Although Filipinos in one Hawaiian survey had a high level of consumption, they also had a high level of abstinence (along with the Chinese).[7] These findings underscore the

need to go beyond aggregating Asian-Americans as a group to an examination of specific groups.

Third, heavy drinking and drug use among Asian-Americans has been hypothesized as one means by which immigrants cope with the stress that accompanies acculturation and changes in social norms, family relationships, and upward mobility, particularly as recent immigrants often do not have adequate social and institutional supports (Yu & Liu, 1987; Zane & Sasao, 1992). Among the stressors potentially contributing to substance use, one must include the threat of discrimination, racism, and even violence, especially among the poor (Kim et al., 1992). Yee and Thu (1987) found in household interviews with 840 adult Indochinese refugees (nearly all Vietnamese) in Houston that 40 percent reported sometimes using alcohol to deal with their problems and another 6 percent often did so. A significant number viewed drinking as an acceptable means of coping with stressful situations and resulting personal problems. Those who reported substance use as a coping mechanism were more likely to report having alcohol or drug problems than were those who used substances for other reasons.

Fourth, theoretical and anecdotal reports suggest that Asian-American adolescents may be at higher risk than adults for substance abuse. Within the Asian-American community, it is widely believed that adolescent substance abuse is increasing, prompting considerable concern. Such concern is also related to the spread of Asian-American youth gangs.[8] Acculturation theories further posit that recent immigrant youth may be at high risk for developing substance abuse problems because they must cope with multiple stressors associated with cultural adjustment as well as the normal stressors of adolescence. They also become acculturated to the dominant White-American culture more quickly than their parents, often leading to an acculturation and generation gap that "has the likely potential to contribute to identity crises and family instability" (Kim et al., 1992). Under such conditions, Asian youth may separate themselves from their families and create their own support networks with peers, leading to rejection of their Asian heritage. An extreme example of this is the growth of Asian-American youth gangs (Kim et al., 1992; Sasao,

1992; Seo, 1995; Zane & Sasao, 1992). As Wong (1985) concluded, drugs can become attractive to Chinese-American youth because they "have to cope with not only the normal problems and concerns of growth but also the added pressures of family, parents, and the larger communities as a result of [their] bicultural and bilingual statuses."

Fifth, it has been similarly suggested that acculturation may have a greater impact on substance use among Asian-American females than males, especially among young females. This is because alcohol and drug use by females is more highly stigmatized in Asian cultures than in America. Anecdotal evidence and research among adults suggest that this traditional pattern may be breaking down with regard to alcohol use among more acculturated adult females, such as the Japanese (Chi et al., 1989).[9] In the 1981 Asian Drinking Survey, abstinence rates among women ranged from 27 to 75 percent, depending on the group. Three percent or less of the women were heavy drinkers, except for Japanese-American women (12 percent, Chi et al., 1989).

In summary, not only has research on substance abuse among Asian-American youth been limited, but what research does exist is outdated and of limited utility for understanding the current population, addressing its needs, and developing prevention and intervention programs. Moreover, many of the assumptions about drug abuse among Asian-American youth are poorly documented. The development and evaluation of prevention programs must be based on empirical evidence that examines the scope and nature of alcohol and drug use within target populations. Kim et al. (1992) observed that in the absence of basic research and etiological theory on substance abuse among Asian-American adolescents, "many community-based prevention strategies for Asian-American communities have been devised based on conjectures or intuitions. . . Some have even been implemented without any real knowledge about whether they actually help deter [substance-using] behavior in Asian-American communities" (p. 253). This lack of knowledge and theory affects both program development and program evaluation because the evaluation can only be "directed toward the blind determination of program suc-

cess or failure without a real understanding of why the program succeeded or failed" (p. 253).

To address some of these issues and fill some of these information gaps, data from Asian-American respondents in 9th and 11th grades in the 1991–92 biennial California Student Substance Use Survey (CSS) were analyzed with regard to four questions:

- What is the scope and nature of substance use among Asian-American youth as compared with Whites, African Americans, Hispanics, and Native Americans?
- How do patterns of use differ between male and female adolescent Asian-Americans, and how do these gender differences compare with those of other ethnic groups?
- What differences in use exist between the major subgroups of Asian-Americans?
- What are the trends in use between 1985 and 1991? What evidence is there that substance use increased or declined?

Methodology

The CSS, established by the Office of the Attorney General of California in 1985, is designed to regularly monitor the use of alcohol, tobacco, and drugs among the State's public school students in grades 7, 9, and 11.[10] It is administered every 2 years in the late fall and early winter. The fourth administration, in 1991, used the same methods and procedures as previous administrations (1985, 1987, and 1989). New schools were selected for the 1991 sample because of signs of attrition among the original schools and concerns that continued participation by these schools might bias the results.

The first stage of sampling was to randomly select a sample of 50 high schools representative of the State. The sample was stratified by six regions and by high and low school enrollment within each region (more than and fewer than 200 students enrolled in 12th grade). For every high school, a "feeder" junior or middle school was selected that was as close as possible to the high school in overall demographic characteristics. The schools were then provided with detailed instructions on drawing a

20 percent random sample of English-speaking students from the rosters of each grade level to be assessed. Project personnel maintained telephone contact with all principals and (where appropriate) district or school staff assigned to supervise the student selection and survey administration.

The final sample of public schools that completed the 1991 survey consisted of 47 high schools and 44 junior high or middle schools throughout the State. The student sample consisted of 2,517 7th graders, 2,589 9th graders, and 2,729 11th graders.[11] The percentages of male and female respondents were almost equal at each grade level. The ethnic/racial composition of the sample and of the State's school enrollment are shown in table 6.2. The sample appears generally representative of the ethnic composition of the State schools except for lower percentages of Hispanics and Whites, which can be attributed to differences in the ethnic classification systems used. In the CSS, students were asked to check one of seven general classifications (Asian-American, African American, Hispanic, Native American, White, Mixed Race/Ethnicity, and Other). In addition, the categories for Asians and Hispanics were broken down into subcategories, 13 for the former and 5 for the latter. In contrast, the State system relies on teachers'

Table 6.2. Ethnic/racial composition of 1991 California Student Substance Use Survey (CSS) sample compared with 1991 statewide enrollment

	Grade 7			Grade 9			Grade 11		
	CSS		State	CSS		State	CSS		State
	No.	%	%	No.	%	%	No.	%	%
Asian	269	10.7	10.7	262	10.1	10.7	324	10.9	12.9
African American	203	8.1	9.1	181	7.0	8.9	232	7.8	7.9
Hispanic	741	29.4	34.1	810	31.3	36.7	952	32.0	32.0
Native American	52	2.1	0.9	59	2.3	0.1	58	1.9	0.9
White	850	33.8	45.3	924	35.7	42.8	1,113	37.4	46.3
Mixed	286	11.4	—	240	9.3	—	207	7.0	—
Other	116	4.6	—	100	3.9	—	83	2.8	—

Note. Statewide enrollment percentages are taken from the California Basic Education Database System.

Source: Skager & Austin (1993).

reports of the racial identities of their students, does not provide subgroup breakdowns for Asian-Americans and Hispanic Americans, and does not include Other or Mixed categories. In the CSS, the Other and Mixed categories drew responses from 9.8 percent of the CSS sample in grade 11. If this percentage is added to the percentage identifying themselves as White, the total rises to 47 percent, compared with 46 percent for the State, which suggests that most CSS students who identified themselves as Other or Mixed would have been identified as White in the State system. This assumption is plausible given that the other main racial and ethnic categories were so close to their actual statewide representation.[12]

Even in California, with its large multiethnic population, ethnic comparisons within grade levels are still complicated in the CSS by small sample sizes for Asian-Americans and Native Americans. For these analyses, the samples of 9th and 11th graders were combined to better compare rates of use among Asians with those of other major ethnic groups. This grade-level combination was also logical because past CSS surveys have not revealed many significant ethnic differences across grade levels, and the major increase in the initiation of use of most drugs occurs between 7th and 9th grade. The resulting samples consisted of 586 Asian-Americans; 413 African Americans; 1,762 Hispanics; 117 Native Americans; 2,036 Whites; and 446 Mixed students. Because the number of Native Americans was still relatively small, the comparison of the results across groups will focus on Asian-Americans, African Americans, Hispanics, and Whites.

Comparison of Asians with Other Ethnic Groups

Tables 6.3 to 6.5 present for each group and gender the rates for any use and weekly use of alcohol and the most common illicit drugs during the 6 months prior to the survey. Weekly use is defined as once a week or more often during this period. Rates for any and daily cigarette smoking in the past month are shown in table 6.3. Results for alcohol, cigarettes, marijuana, cocaine, and any illicit drug use are further illustrated in figures 6.1 to 6.5.

Table 6.3. Percentages of 9th and 11th grade students using alcohol and tobacco, 1991 California Student Substance Use Survey, by ethnicity and gender

	Total Alcohol			Beer			Wine			Spirits			Tobacco[a]		
Ethnicity/Race	**All**	**M**	**F**	**All**	**M**	**F**	**All**	**M**	**F**	**All**	**M**	**F**	**All**	**M**	**F**
Asian (n = 586)															
Any	56.2	59.1	53.3	43.1	46.9	37.5	42.5	42.8	42.0	26.5	28.0	25.5	19.6	19.8	19.3
Weekly+	10.5	11.7	9.1	7.5	9.4	5.3	4.3	2.6	5.7	2.4	2.6	2.3	5.7	5.3	6.2
African American (n = 413)															
Any	68.1	67.9	68.1	49.9	55.1	44.8	56.3	51.4	60.5	37.0	35.3	37.7	16.5	16.8	15.9
Weekly+	11.0	15.0	7.6	7.3	11.8	3.1	3.6	4.8	2.7	6.1	6.4	5.8	4.0	5.0	2.8
Hispanic (n = 1,762)															
Any	74.7	73.5	75.8	65.9	66.5	65.0	60.2	55.9	64.5	43.1	44.4	41.5	29.1	30.6	27.7
Weekly+	18.5	21.3	15.7	15.0	18.6	11.4	5.9	5.0	6.7	5.2	7.1	3.4	6.3	7.6	5.0
Native American (n = 117)															
Any	75.0	71.4	79.2	66.4	66.1	66.0	61.5	47.6	77.4	53.8	49.2	58.5	45.5	40.0	51.0
Weekly+	21.6	20.6	22.6	14.0	11.3	17.0	3.4	1.6	3.8	6.8	4.8	7.5	17.9	16.6	17.6
White (n = 2,036)															
Any	75.4	74.2	76.6	66.5	66.3	62.7	61.9	55.7	68.2	51.0	51.3	50.8	31.0	30.5	30.5
Weekly+	19.9	21.4	18.3	15.9	18.3	13.4	6.2	4.9	7.8	8.4	8.9	7.7	11.9	11.1	12.5
Mixed (n = 446)															
Any	75.7	74.4	77.2	63.7	67.6	59.2	63.3	57.1	70.9	52.2	53.8	50.5	33.4	30.9	36.1
Weekly+	20.3	23.5	16.5	15.4	20.2	9.7	8.5	8.4	8.7	9.0	10.5	6.8	12.4	13.9	10.4
Other (n = 183)															
Any	72.5	74.1	70.3	59.9	59.8	59.5	60.7	59.8	63.0	49.2	55.6	39.2	28.8	32.4	23.6
Weekly+	14.8	10.5	9.5	11.5	15.0	6.8	4.4	3.7	5.5	5.5	6.9	4.1	9.0	8.6	9.7
Total															
Any	72.5	71.8	73.2	61.4	63.4	59.2	59.0	54.2	64.0	44.9	46.0	44.0	28.4	28.8	28.0
Weekly+	17.7	20.0	15.4	13.8	16.9	10.7	5.8	4.8	6.7	6.5	7.4	5.5	8.9	9.2	8.5

Note. Students were asked whether they had used alcohol in the past 6 months or smoked cigarettes in the past month.

[a]For tobacco, the question asked about any and daily (not weekly) use.

Source: Skager & Austin (1993).

Compared with the four other major ethnic groups, Asian-Americans generally reported among the lowest prevalence rates across 10 categories of licit and illicit drugs. However, contrary to stereotypes of Asian-Americans as low users and African Americans as high users, in some categories Asians equaled or exceeded the rates reported by African Americans.

Alcohol

Asians reported the lowest 6-month prevalence rates of drinking in each alcoholic beverage category. They were followed by African Americans, with rates 7 to 15 points higher (depending on the beverage) than those of Asian-Americans. For any alcohol use (figure 6.1), all other groups reported about 75 percent prevalence rates. Generally, Asian-American drinking rates were about one-third lower than those for Whites: for any alcohol, the rates were 56 percent (Asians) versus 75 percent (Whites); for beer, 43 percent versus 67 percent; for wine, 43 percent versus 62 percent; and for spirits, 27 percent versus 51 percent. Asian-Americans were half as likely as Whites to report weekly drinking.

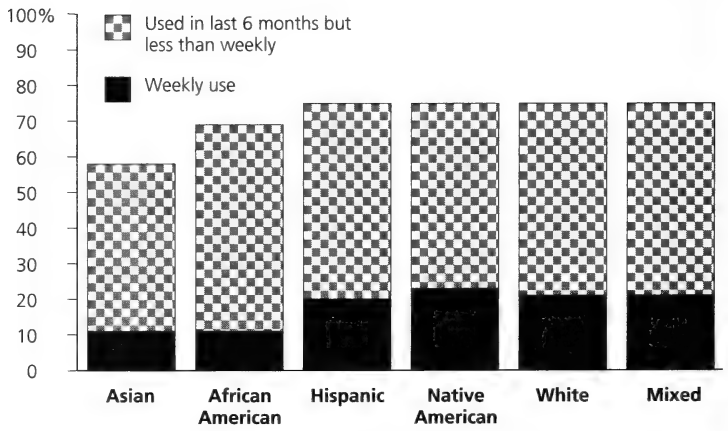

Figure 6.1.—Any and weekly use of alcohol in the past 6 months, 1991 California Student Substance Use Survey sample, 9th and 11th grades combined, by ethnicity.

Source: Skager & Austin (1993).

However, there is some suggestion that Asian-Americans equaled African Americans in their level of drinking, despite the lower prevalence rates among Asian-Americans. Both groups reported similar rates of weekly drinking of any alcohol (11 percent), beer (7 percent), and wine (4 percent). The proportion of weekly drinking to total prevalence was higher among Asian-Americans than African Americans (19 percent versus 16 percent). In addition, 14 percent of both groups reported heavy drinking, defined as drinking five drinks in a row in the last 2 weeks.

The National High School Seniors Survey, the New York State survey, and several local surveys across the Nation have consistently found that Asian-American youth have the lowest overall prevalence of alcohol consumption (Bachman et al., 1991; Kim et al., 1992; Murray, Perry, O'Connell, & Schmid, 1987).[13] In the 1983 New York survey, Asian-Americans had the lowest annual drinking rate out of six ethnic groups. Only 45 percent of Asian-Americans reported drinking at least once in the previous year, substantially below the 59 percent reported by African Americans (the next lowest group). The highest rate was 76 percent, reported by Whites (Barnes & Welte, 1986; Welte & Barnes, 1987). Similar results were found in the 1990 New York survey, although all groups reported lower annual prevalence rates (36 percent for Asians) (Barnes et al., 1993; New York, 1991).

Results regarding level of drinking have been much more variable and inconsistent. In some local studies, Asian-Americans have reported the lowest levels or frequencies of drinking (Maddahian, Newcomb, & Bentler, 1988a, 1988b; Murray et al., 1987). However, several other studies are consistent with the CSS in showing Asian-Americans report frequencies and levels of drinking equal to or higher than African Americans. In the NSS, Asian-Americans reported considerably less heavy and daily drinking than other groups, but differences between Asian-Americans and African Americans were small (Bachman et al., 1991).

Both the 1983 and 1990 New York surveys of secondary students present a complex picture. Asian-Americans had the lowest prevalence of drinking among six ethnic groups, but those who drank tended to be relatively heavy drinkers. The 1983 New York survey found exceptionally high rates of consumption among Asian

drinkers. The proportion of Asian-American heavy drinkers (6 percent) was slightly higher than that of African Americans (5 percent) and of West Indians (4 percent) and only slightly lower than that of Hispanic Americans (8 percent), although still almost one-third the rate for Whites (16 percent). (Heavy drinking was defined as drinking at least once a week and drinking large amounts at a typical session.) Moreover, among drinkers, Asians drank more per day than members of any other ethnic group (1.46 ounces absolute alcohol per day, versus 0.76 ounces for Whites). Asian-American drinkers ranked second highest in the mean number of times they drank per month (7.5), exceeded only by Native Americans (Barnes & Welte, 1986; Welte & Barnes, 1987). In the 1990 survey, the rate of heavy drinking among Asian-Americans (4 percent) was not substantially different from the rates for Hispanics, West Indians, and African Americans, although it was above one-third the rate for Whites (11 percent) and Native Americans (13 percent) (Barnes et al., 1993).

Cigarettes

There is much less information on tobacco use among Asian-Americans than on alcohol drinking. Prior research is consistent with the CSS in showing that Asian-American adolescents have relatively low smoking rates, although rates are higher than those of African Americans (Bachman et al., 1991; Kim et al., 1992; Maddahian, Newcomb, & Bentler, 1986, 1988a, 1988b; Newcomb, Maddahian, Skager, & Bentler, 1987; Segal, 1992). In the CSS, one-third fewer Asian-American adolescents than Whites smoked; however, their rates exceeded those of African Americans and their daily smoking rates were close to those of Hispanics. Like the CSS data, the NSS data indicate that Asian-Americans have smoking rates one-third lower than those of Whites and the same or slightly higher than those of African Americans. Even greater smoking involvement is suggested by the 1983 New York survey. Although Asian-Americans had the lowest prevalence of smoking except for West Indians, they had the highest quantity of cigarettes smoked per day among those who did smoke (Welte & Barnes, 1987).[14]

The Asian-American rate for cigarette smoking in the past month (20 percent) was about one-third lower than that of Hispanic Americans (29 percent) or Whites (32 percent), but higher than that of African Americans (17 percent; see figure 6.2). More important, Asian-Americans' daily smoking rate (6 percent) not only exceeded that of African Americans (4 percent) but was similar to that of Hispanics (6 percent). Among smokers only, 29 percent of Asian-Americans smoked daily compared with 24 percent of African Americans and 22 percent of Hispanics (the rate for Whites was 37 percent).

Marijuana and Other Illicit Drugs

Asian-Americans reported the lowest 6-month prevalence rate for marijuana use (10 percent), less than half the rate of any other group (e.g., 25 percent of Hispanic Americans, 27 percent of Whites, and 30 percent of African Americans) (figure 6.3). For weekly marijuana use, Asian-Americans' rate (2 percent) was three-quarters lower than that of the next lowest group, Hispanics (8 percent).

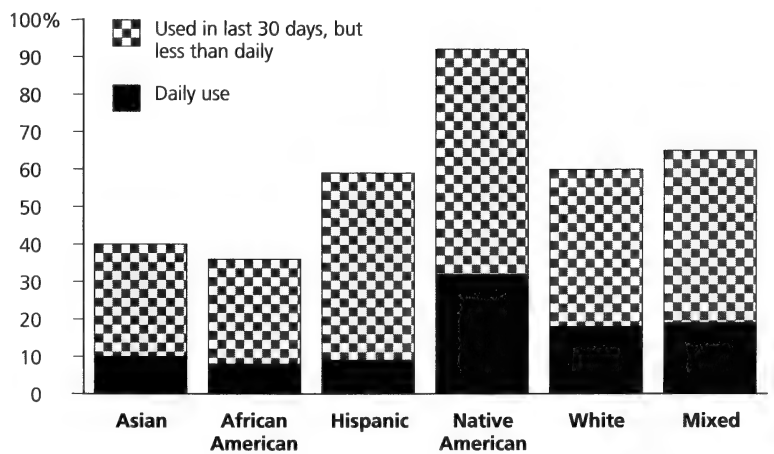

Figure 6.2.—Any and daily cigarette smoking in the past month, 1991 CSS sample, 9th and 11th grades combined, by ethnicity.

Source: Skager & Austin (1993).

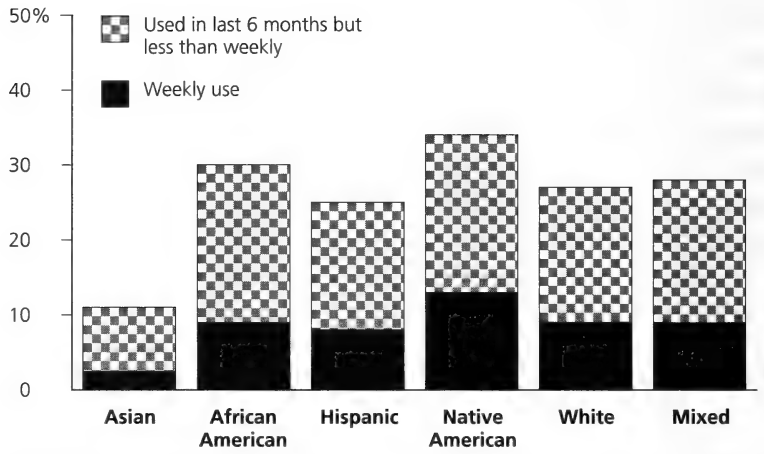

Figure 6.3.—Any and weekly use of marijuana in the past 6 months, 1991 CSS sample, 9th and 11th grades combined, by ethnicity.

Source: Skager & Austin (1993).

For use of other illicit drugs, differences between Asian-Americans and African Americans—and even Hispanics—were smaller and more varied. Use of cocaine and amphetamines was higher among Asians (4 percent) than among African Americans (1 percent) and was closer to the levels reported by Hispanics and even by Whites (figure 6.4). The same was true for LSD, except that the rate for Whites was three times higher. Asian-Americans also slightly exceeded African Americans in any use of inhalants, sedatives, barbiturates, and tranquilizers. Differences between Asian-Americans and Whites were relatively small for inhalants (8 percent versus 11 percent), sedatives (2 percent versus 3 percent), and barbiturates (2 percent each; table 6.5).

Despite these findings, Asian-Americans had a very low rate for use of *any* illicit drug (20 percent), at least one-third lower than that of any other group (32 to 43 percent; figure 6.5). This appears to be largely due to their very low rate for use of marijuana, the most popular illicit drug, which helps explain why Asian-

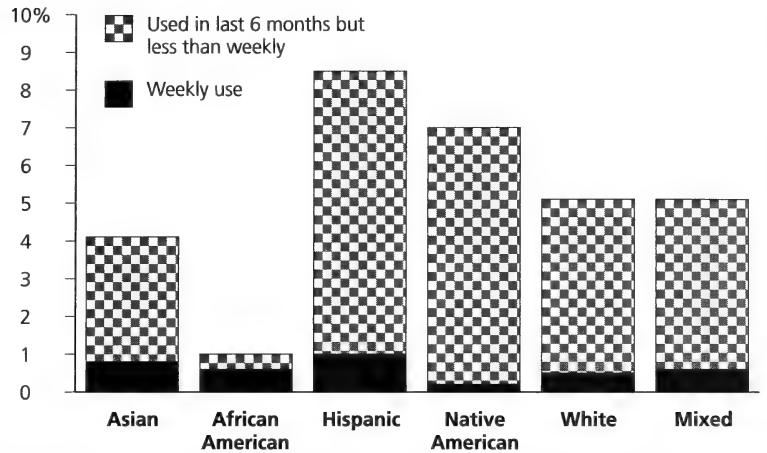

Figure 6.4.—Any and weekly use of cocaine in the past 6 months, 1991 CSS sample, 9th and 11th grades combined, by ethnicity.

Source: Skager & Austin (1993).

Americans' rate of any illicit drug use was so much lower than that of African Americans (20 percent versus 36 percent). African Americans reported the second highest rate for marijuana use (30 percent).

Like in the CSS, previous studies have consistently shown Asian-American youth to be the lowest users of marijuana. Generally, marijuana use rates among Asians have been at least half those for Whites (Bachman et al. 1991; New York, 1991; Kim et al., 1992; Welte & Barnes, 1985, 1987; see also Maddahian et al., 1986, 1988a, 1988b; Wong, 1985). For example, in the 1990 New York State survey, 10 percent of Asians reported marijuana use compared with 27 percent of Whites, 23 percent of Hispanics, and 21 percent of African Americans. One exception appears to be the Alaska State survey, in which marijuana use was reported by

Table 6.4. Percentages of 9th and 11th grade students using illicit drugs, 1991 California Student Substance Use Survey, by ethnicity and gender

	Any Illicit Drug			Marijuana			Cocaine			Amphetamines			LSD		
Ethnicity/Race	**All**	**M**	**F**	**All**	**M**	**F**	**All**	**M**	**F**	**All**	**M**	**F**	**All**	**M**	**F**
Asian (n = 586)															
Any	19.9	20.5	19.3	10.6	12.7	8.3	4.1	4.2	3.4	3.9	3.9	3.0	3.1	3.6	1.5
Weekly+	—	—	—	2.2	2.9	1.5	0.7	1.0	0.4	0.7	0.6	0.8	0.5	0.3	0.8
African American (n = 413)															
Any	36.1	39.0	33.6	30.1	31.8	28.7	1.0	1.1	0.5	1.5	1.1	1.4	0.7	0.5	0.4
Weekly+	—	—	—	8.0	8.1	7.6	0.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hispanic (n = 1,762)															
Any	33.7	34.1	33.4	25.1	26.1	23.9	7.4	7.5	7.2	5.2	5.1	5.3	4.0	4.4	3.7
Weekly+	—	—	—	6.4	9.4	3.5	0.9	0.9	0.9	0.6	0.5	0.7	0.4	0.3	0.5
Native American (n = 117)															
Any	43.1	33.3	54.7	33.3	30.2	35.8	6.8	6.3	5.7	10.3	6.3	15.1	12.0	6.3	17.0
Weekly+	—	—	—	12.0	7.9	15.1	0.0	0.0	0.0	0.0	0.0	0.0	4.3	1.6	5.7
White (n = 2,036)															
Any	35.2	34.3	36.2	27.3	28.0	26.7	4.9	5.1	4.8	6.2	6.2	6.3	9.5	10.0	9.0
Weekly+	—	—	—	8.1	9.8	6.6	0.5	0.3	0.7	1.3	1.2	1.5	1.3	1.8	0.8
Mixed (n = 446)															
Any	41.2	42.4	39.8	28.7	30.3	26.7	4.9	5.0	4.9	5.6	6.3	4.4	6.1	7.2	4.9
Weekly+	—	—	—	8.1	10.1	5.3	0.7	0.8	0.5	0.4	0.4	0.5	1.4	2.1	0.5
Other (n = 183)															
Any	31.9	32.4	31.1	24.0	24.1	24.3	7.1	9.3	4.1	7.7	6.5	9.6	9.3	8.3	10.8
Weekly+	—	—	—	7.7	6.5	9.5	0.5	0.0	1.4	1.1	0.0	2.7	0.0	0.0	0.0
Total															
Any	33.8	33.6	34.0	25.2	26.1	24.3	5.4	5.6	5.1	5.4	5.2	5.4	6.2	6.5	5.8
Weekly+	—	—	—	7.0	8.9	5.4	0.6	0.6	0.7	0.8	0.7	1.0	0.8	1.0	0.7

Note. Students were asked about use in the past 6 months.

Source: Skager, R., & Austin, G. (1993).

Table 6.5. Percentages of 9th and 11th grade students using inhalants and depressants, 1991 California Student Substance Use Survey, by ethnicity and gender

	Inhalants			Sedatives			Barbiturates			Tranquilizers		
Ethnicity/Race	**All**	**M**	**F**	**All**	**M**	**F**	**All**	**M**	**F**	**All**	**M**	**F**
Asian (n = 586)	7.7	7.2	8.3	1.7	1.3	2.3	1.7	1.9	1.6	1.2	0.7	1.9
African American (n = 413)	6.9	8.7	5.5	0.0	0.0	0.0	0.7	1.1	0.4	1.0	0.5	1.3
Hispanic (n = 1,762)	12.8	13.8	11.9	2.1	1.6	2.6	1.3	1.5	1.1	4.8	3.7	5.9
Native American (n = 117)	11.2	9.2	13.2	0.9	0.0	1.9	1.7	0.0	3.8	7.8	3.2	13.2
White (n = 2,036)	10.5	11.0	9.9	3.1	3.6	2.5	1.9	2.3	1.5	5.7	4.8	6.6
Mixed (n = 446)	15.4	17.7	12.7	4.1	3.8	4.4	2.3	2.5	1.9	7.0	6.3	7.8
Other (n = 183)	8.8	8.3	9.5	2.2	0.9	4.1	2.8	1.9	4.1	5.0	5.6	4.1

Note. Students were asked about use in the past 6 months.

Source: Skager & Austin (1993).

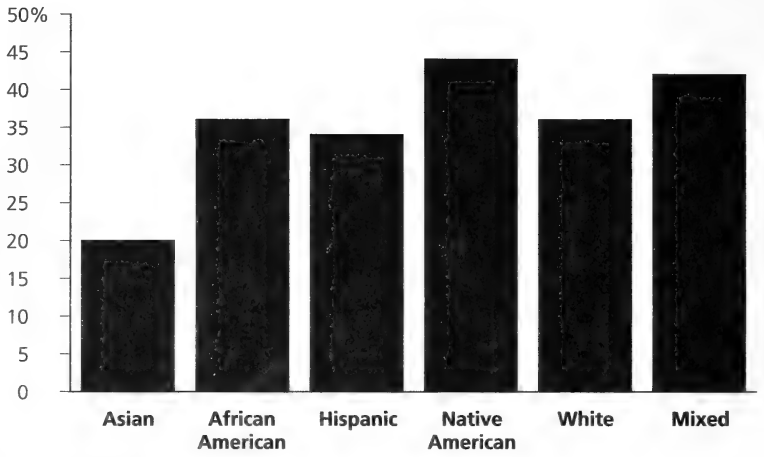

Figure 6.5.—Use of any illicit drug in the past 6 months, 1991 CSS sample, 9th and 11th grades combined, by ethnicity.

Source: Skager & Austin (1993).

43 percent of Asians, compared with 36 percent of African Americans and 49 percent of Whites (Segal, 1992).

The CSS findings add support to prior research indicating that Asian-American youth have rates similar to or higher than those of African Americans for use of stimulants such as cocaine and amphetamines (Bachman et al., 1991; Kim et al., 1992; New York, 1991; Newcomb et al., 1987; Segal, 1992; Wong, 1985). In the 1988 Alaska survey, Asians reported rates of cocaine use twice as high as those of African Americans and only one-quarter lower than those of Whites (Segal, 1992). Similar results have been reported for depressant drugs and tranquilizers (Kim et al., 1992; Segal, 1992). In the NSS, Asians reported rates similar to those of African Americans for cocaine and stimulants. Their rates were higher, and more similar to those of other ethnic/racial groups, for tranquilizers, sedatives, and other opiates (Bachman et al., 1991).

The CSS results showing that Asian-Americans had higher rates of LSD and inhalant use than did African Americans are consistent with results from surveys of high school seniors nationally and students in New York, Alaska, and North Carolina

(Bachman et al., 1991; Kim et al., 1992; New York, 1991; Segal, 1992). In New York, Asians' inhalant use (14 percent) was higher than use among African Americans (11 percent) and almost the same as that of Hispanics (16 percent), although still approximately half that of Whites (23 percent). In the NSS, Asian-Americans reported rates similar to those of African Americans for LSD and higher than those of African Americans for some substances (inhalants, tranquilizers, sedatives, and other opiates).

Maddahian et al. (1986, 1988a, 1988b) reported that the trend for misuse of nonprescription medications (sleeping pills, stimulants, cough medicines, and cold and allergy medications) was higher for Asian-Americans than for other ethnic groups. They recommend that particular emphasis be placed on preventing misuse of nonprescription medication among Asian-American youth. Similarly, in the 1983 New York survey, Asian-Americans' use of over-the-counter and psychotherapeutic drugs exceeded that of both African Americans and West Indians (Welte & Barnes, 1985, 1987).

The large difference in marijuana use rates between Asian-Americans and African Americans in the CSS resulted in Asians' ranking lowest of all groups for use of *any* illicit drug. In other studies, because Asian-Americans reported higher rates for many illicit drugs than did African Americans, their overall rates for use of illicit drugs or substances in general were higher than those of African Americans (Kim et al., 1992; Segal, 1992; Welte & Barnes, 1985, 1987). In the Alaska survey, lifetime use of any illicit drug use was reported by 41 percent of African Americans, 51 percent of Asian-Americans, and 57 percent of Whites (versus 64 to 74 percent among other groups) (Segal, 1992). For 20 drug categories combined, Kim et al. (1992) found that Asian-Americans had a mean rate of 9.8 percent, compared with 6.0 percent for African Americans and 13 percent for Whites. In the 1983 New York survey, the mean number of times Asian-Americans reported having used illicit drugs in their lifetime was similar to the mean number reported by Whites and Hispanic Americans (26), higher than that of African Americans (19), and exceeded only by Native Americans (Welte & Barnes, 1985, 1987).

The finding that Asian-Americans may be at higher risk for the use of certain illicit drugs rather than for alcohol use is further suggested by Ellickson et al. (1992). They examined the pattern of drug involvement among 4,145 students (72 percent White, 10 percent Asian-American, 8 percent Hispanic American, 7 percent African American) at 30 west coast secondary schools participating in the ALERT prevention program evaluation. The data were collected over a 4-year span from students in grades 7 through 10, during the mid to late 1980s. The findings supported the view that regular alcohol use and smoking are separate stages in the sequence of drug use for most youth, but indicated that their position in the sequence may vary by ethnicity. Ethnic-group differences were not evident with regard to initial use but were apparent for later stages of use. Weekly alcohol use followed marijuana use and was a precursor for use of all other illicit drugs for Hispanic-American, White, and African-American youth. However, weekly alcohol use followed use of hard drugs for Asian-Americans, for whom the sequence placed regular smoking and drinking after initial use of pills and other hard drugs, with increased drinking last. In other words, weekly alcohol use directly followed initial marijuana use for African Americans, Hispanic Americans, and Whites, but it followed hard drug use among Asian-Americans.[15]

Summary

Taken as a whole, these findings support the conclusion that Asian-American youth are at relatively lower risk for substance abuse than are youth of most other ethnic groups and are often at the lowest risk of all. However, as one looks at specific categories the evidence suggests that abuse may not be as low as has generally been assumed. Even though African Americans have an image of being heavily involved in drug use, Asian-Americans often reported rates equivalent to or even higher than those of African Americans, including rates for weekly drinking; current and daily cigarette smoking; and use of cocaine, amphetamines, and LSD. Similar findings have been reported in other research.

These findings strongly support the belief that substance abuse is less prevalent among Asian-Americans than among other eth-

nic groups. This is especially true for marijuana. But they also point to the need to rethink the stereotypical notion that substance abuse is virtually nonexistent among Asian-Americans and is much higher among African Americans. Much more attention needs to be paid to abuse of substances other than alcohol and marijuana among Asian-Americans, especially cigarettes, stimulants, and psychotherapeutic drugs. The findings also suggest that even though their overall prevalence rates for alcohol are low, Asian-American youth who do drink may be heavier drinkers than African-American youth.

Gender Differences

Tables 6.3 through 6.5 also provide 6-month prevalence rates by gender for 9th and 11th graders in the 1991 CSS. The analysis of gender differences focused on the most commonly used drugs because the subgroup sample sizes were reduced by half. The results reveal that Asian-Americans of both genders are at relatively low risk of substance abuse compared with their counterparts in other groups. Asian-American females often reported the lowest rates of any gender-ethnicity combination. However, in cigarette smoking and illicit drug use, Asian-American females were not as different from Asian-American males as one might expect, and their rates often exceeded the rates of African-American females.

Alcohol

Overall prevalence rates for all alcoholic beverage categories were lowest among Asian-American females. Asians were the only group in which females always reported lower rates than males and the only group in which this was true for use of any alcoholic beverage. The greatest gender difference among Asian-Americans was for beer consumption (38 percent female versus 47 percent male). Asian-American males also exceeded Asian-American females in rates of weekly and heavy drinking (for weekly use of any alcohol, the rates were 9 percent for females and 12 percent for males; for heavy drinking, 11 percent versus 16 percent). An interesting variation, however, is evident when one compares weekly drinking among Asian-Americans

and African Americans. For any alcohol and for beer, Asian-American males reported rates lower than those of African American males, but Asian-American females' rates exceeded those of African American females.

Marijuana and Other Drug Use

There were large gender differences among Asians for marijuana use. Only 8 percent of Asian-American females reported any use, compared with 13 percent of males—a 40 percent difference. Asian-American females' rates of LSD use were half those of males. However, for *any* illicit drug use, the rates were very close (19 percent versus 21 percent) because gender differences were slight (generally about 1 percentage point) for all other illicit drugs. In some cases, males' rates were higher (e.g., for LSD, cocaine, and amphetamines); in others, females' rates were higher (e.g., for inhalants, sedatives, and tranquilizers). In all cases except marijuana and inhalant use by males, Asian-Americans' rates exceeded those of African Americans of the same gender. For sedatives and barbiturates, Asian-Americans' rates were similar to those of Hispanic Americans. For inhalants, Asian-Americans and Native Americans were the only other groups in which females did not report lower rates than males. Although these results must be interpreted cautiously because of the smaller sample sizes in the gender analysis, they do suggest that the gender difference evident for marijuana may not apply to other drugs.

Cigarettes

In contrast to the situation for alcohol, Asian-Americans of both genders reported about the same rates for any current smoking (19 percent) and daily smoking (5 to 6 percent). Such gender similarity is also evident for other groups, except that females were slightly less likely to smoke among Hispanic Americans and more likely among Native Americans. Moreover, compared with African Americans, Asian-Americans of both genders reported higher smoking rates. Asian-American females' rate of weekly smoking was twice that of African-American females (among males the rates were equivalent) and slightly higher than that of Hispanic females.

Summary

In summary, Asian-Americans—male and female—were at relatively low risk for all categories of substance abuse compared with persons of the same gender in most other ethnic groups. Of all ethnic-gender combinations, Asian-American females were the least likely to report alcohol and marijuana use. However, contrary to what might be expected from the popular stereotype, Asian-American females reported rates of cigarette smoking and illicit drug use that were similar to those of Asian-American males and higher than those of African-American females.

The 1983 New York survey revealed very large gender differences among Asian-Americans in use of alcohol, cigarettes, and illicit drugs. The relatively high rate of heavy drinking found for Asian-Americans in this survey was due to a striking gender difference. All of the heavy drinkers were males, and Asian-American females reported the lowest rates of all groups.[16] Although smoking was more prevalent among Asian-American females than among Asian-American males (19 percent versus 15 percent), almost all the heavy smokers were male. They smoked 16.8 cigarettes per day, twice the quantity consumed by the next heaviest group of smokers. The survey concluded that Asian-American males were particularly at risk for heavy smoking and that Asian-American females were at low risk. Finally, Asian-Americans showed the greatest gender difference of all groups in total lifetime use of illicit drugs. Among Whites who had ever used illicit drugs, the male-to-female ratio was 29:26; among Asians, it was 42:9 (Barnes & Welte, 1986; Welte & Barnes, 1985, 1987).

Barnes and Welte's studies were conducted nearly a decade ago, but more recently large gender differences were found for alcohol, tobacco, and marijuana use among fifth graders in Washington State. Asian males reported about half the alcohol rate of White males (26 percent versus 57 percent), but the rate among Asian females was one-fifth that of Whites (8 percent versus 41 percent). From a different perspective, White males reported a drinking rate 1.4 times higher than that of White females; the rate for Asian-American males was 3 times higher than that for

Asian-American females. Both Asian-American males and females reported lower rates than same-gender African Americans.

The best comparison data, however, are provided by Bachman and colleagues' (1991) analysis of use among NSS 12th graders between 1985 and 1989. Consistent with the CSS results, Asian-American females often reported rates similar to or higher than those of African-American females. The biggest difference from the CSS is in overall drinking prevalence rates. African-American females had the lowest annual prevalence rates of all gender-ethnicity combinations (64 percent). The rate of alcohol drinking was only slightly less for Asian-American females (68 percent) than for males (69 percent). Although both surveys show that Asian-American females were much less likely than Asian-American males to report regular and heavy drinking, their

Table 6.6. Results of the California Student Substance Use Survey (CSS; 9th and 11th graders) and the National High School Seniors Survey (NSS; 12th graders), by gender

	NSS (1985–89)		CSS (1991)	
	Male (%)	**Female (%)**	**Male (%)**	**Female (%)**
Prevalence rate[a]				
Alcohol	69.3	67.5	59.1	53.3
Marijuana	19.6	17.1	12.7	8.3
Cocaine	5.8	5.7	4.2	3.4
Amphetamines	—	—	3.9	3.0
Stimulants	5.6	2.6	—	—
LSD	2.5	1.9	3.6	1.5
Inhalants	4.8	3.2	7.2	8.3
Sedatives	3.4	2.6	1.3	2.3
Barbiturates	2.6	2.3	1.9	1.6
Tranquilizers	3.2	1.8	0.7	1.9
Current cigarette smoking	16.8	14.3	19.8	19.3
Daily smoking	9.0	9.4	5.3	6.2
Heavy alcohol use	19.4	10.7	16.0	11.0

[a]CSS results are for the past 6 months; NSS, past 12 months.

Sources: Skager & Austin (1993); Bachman et al. (1991).

rates were about the same as or higher than those of African-American females.

The NSS differs from the CSS in showing higher rates of current smoking among Asian-American males than among females (17 percent versus 14 percent). However, both surveys showed that Asian-American males and females had similar rates for daily smoking (9 percent), higher than those of African Americans and (among females) Mexican Americans (8 percent). About 4.5 percent of both genders among Asian-Americans smoked at the rate of half a pack or more per day, compared with 3 percent for African-American males and 2 percent for African-American females. Asian-American females' rates were twice as high as those of Mexican Americans.

As with the CSS, Asian-American females reported the lowest rates of marijuana use of any gender-ethnicity combination (17 percent versus 20 percent for Asian-American males). However, in several other categories Asian-American females reported rates equivalent to those of males (for LSD, cocaine, sedatives, and barbiturates). Their reported rates for stimulants were slightly higher than those reported by Asian-American males. Compared with African-American females, Asian-American females were similar in annual prevalence for marijuana, inhalants, and tranquilizers. Their rates were higher for LSD, cocaine, other opiates, barbiturates, sedatives, and, especially, stimulants (7 percent versus 3 percent). Moreover, Asian-American females' rates were similar to those of Hispanics for inhalants, LSD, other opiates, sedatives, and barbiturates. Asian-American males' marijuana use rates were by far the lowest. However, for most other drugs they reported rates slightly higher or at least similar to those of African Americans, at times approaching those for Hispanic Americans (for inhalants, other opiates, sedatives, and tranquilizers).

Thus, overall, the NSS confirms the CSS data in showing Asian-American females to be at relatively low risk, but not as low compared with African-American females and Asian-American males as one might expect. This finding is supported by the limited other research that is available, although gender differences within Asian-American samples are often greater. Taken as a whole, the research examining gender differ-

ences for substance use among Asian-Americans suggests the following:

- Asian-American males and females are both at relatively low risk compared with persons of the same gender in most other ethnic groups.
- Gender differences between Asian-American males and females are large, especially at high levels of use. Both report similar rates of daily smoking.
- Contrary to stereotype, Asian-American females report use rates similar to those of Asian-American males and higher than those of African-American females for smoking and several categories of illicit drug use.

Comparison Across Asian Groups

To examine differences among specific Asian-American groups, 9th- and 11th-grade respondents from the 1989 and 1991 CSS administrations were combined, yielding a total sample of 1,232. Subsamples were then created for six Asian-American groups: Chinese, Filipinos, Japanese, Koreans, Pacific Islanders, and Southeast Asians. Two CSS administrations were combined because even with California's large population of Asian-American youth, in any 1 year the survey sample does not include enough Asians to allow for subgroup comparisons. For these analyses, a comparison sample was created by aggregating all non-Asian-Americans (n=8,331) in the same grades and survey years (i.e., all 9th and 11th graders in the 1989 and 1991 surveys who did not identify themselves as Asian).

For each Asian-American group, table 6.7 shows the sample size, the percentage born in the United States, and the gender distribution. The groups varied greatly in the percentage born in the United States. In all groups except Pacific Islanders and Southeast Asians, there were more males than females. The mean age of most groups was 15.5 years; the Japanese and Chinese were only slightly younger (15.1 and 15.3).

Table 6.8 reports results by group for substance use in the past 6 months, past month (current), and lifetime. Because of the small

Table 6.7. Sample characteristics of Asian groups (9th and 11th graders), 1989 and 1991 California Student Substance Use Surveys combined

Group	No.	U.S.-Born (%)	% Male	% Female
Chinese	314	27.4	59.4	40.6
Filipino	339	47.3	51.3	48.7
Japanese	56	70.9	62.5	37.5
Korean	83	26.8	53.7	46.3
Pacific Islander	92	69.3	45.6	54.4
Southeast Asian	263	20.5	43.6	56.4
Other	210	20.1	53.8	46.2

Sources: Skager & Austin (1993); Bachman et al. (1991).

sample sizes for Pacific Islanders, Koreans, and Japanese, caution is warranted in interpreting differences across all Asian-American groups. In addition, because the lifetime items on any substance use and cigarette smoking were new to the 1991 survey, the results for these items are based only on the 1991 sample of 586 Asian-Americans and are not as reliable. However, the results support that examination of substance use within the broad aggregate category of Asians does mask important differences in use across groups. Prevalence rates varied markedly. In particular, the differences between the Pacific Islanders and Southeast Asians were pronounced and consistent. In addition, the results for Asian-Americans and non-Asian-Americans were consistent with those reported above for Asians as a whole compared with Whites.

Alcohol

Across Asian-American groups, the range in 6-month alcohol prevalence rates was 17 to 50 percent. For any alcohol and for each specific beverage (with the exception of wine), Pacific Islanders reported the highest rates, although they were still lower than those for non-Asian-Americans. Koreans and Filipinos reported the next highest rates, with the exception of a relatively lower rate for spirits among Filipinos. The Southeast Asians consistently had the lowest rates, followed closely by the Chinese.

Table 6.8. Percentages of 9th and 11th grade students using substances, 1989 and 1991 California Student Substance Use Survey samples combined, by group

Substance Use	Non-Asian *n* = 8,331	Chinese *n* = 314	Filipino *n* = 339	Japanese *n* = 56	Korean *n* = 83	Pacific Islander *n* = 92	Southeast Asian *n* = 119
Past 6 months							
Alcohol	58.6	20.7	42.6	33.9	42.2	50.0	16.8
Beer	62.3	30.6	48.1	35.7	49.4	52.2	26.1
Weekly	14.4	2.8	6.8	8.9	7.2	15.5	0.8
Wine	60.7	27.1	57.1	42.9	51.2	46.7	18.5
Weekly	6.8	0.9	3.3	0.0	6.1	7.8	4.2
Spirits	46.1	13.4	29.6	32.1	34.9	41.8	11.0
Weekly	6.3	0.3	1.2	3.6	3.6	6.6	0.0
Illicit drug	17.4	3.9	8.3	5.4	9.9	15.6	8.4
Marijuana	26.9	2.9	13.9	8.9	13.3	23.1	5.0
Cocaine	6.2	1.9	4.1	3.6	1.2	2.2	5.0
Inhalants	11.0	6.7	7.4	8.9	8.5	10.9	6.7
Amphetamines	6.6	1.3	4.5	3.6	1.2	2.2	4.2
Sedatives	2.4	0.3	0.9	3.6	2.4	3.3	2.5
Past month							
Smoking	27.9	10.6	22.8	14.3	24.7	25.0	10.3
Daily	9.6	1.8	5.7	3.6	5.0	13.1	2.7
Heavy drinking[a,b]							
Any	24.3	9.1	14.2	12.1	20.0	35.2	6.8
3 or more times	8.1	2.0	4.5	0.0	2.0	9.3	3.4
Lifetime use							
Cigarettes[b]	48.2	25.8	39.1	30.3	43.8	57.4	23.9
Illicit drug	33.1	3.9	19.8	12.5	18.1	30.8	6.7
Alcohol	82.0	55.3	73.8	58.9	66.3	76.7	47.5
Any substance	45.1	22.2	28.0	21.2	24.5	50.0	10.9

[a]Defined as 5 drinks in a row in the past 2 weeks.

[b]Based on 1991 data only, sample size 584 for all Asians and 4,836 for non-Asians.

Sources: Skager & Austin (1993); Bachman et al. (1991).

Across all beverage categories, the rates for both Southeast Asians and Chinese were no more than half as high as the rates for Pacific Islanders. Moreover, their rates were half those of non-Asians or lower; in the case of spirits, more than 3.5 times less. The Japanese tended to fall between the Chinese and the Koreans and Filipinos.

For weekly drinking, the rank order was the same as for overall drinking prevalence. Not only did Pacific Islanders report much higher rates across beverages than other Asian-American groups, but their rates were equivalent to or higher than those of non-Asian-Americans. Weekly beer drinking was reported by almost twice as many Pacific Islanders (16 percent) as the next highest group (the Japanese). Among beer drinkers only, the proportion of weekly drinkers was also higher among Pacific Islanders (29 percent) than among non-Asian-Americans (23 percent).

The Southeast Asians and Chinese consistently reported the lowest rates, with the exception of wine drinking among Southeast Asians. For weekly beer drinking, the Chinese rate was more than 20 percent lower than the rate for Pacific Islanders, and the differences were even greater among Southeast Asians. For other groups, rankings differed across beverages. Rates in the middle to high range were reported by the Japanese for beer and spirits; by Koreans for wine and spirits; and by Filipinos for beer.

Cigarettes

Pacific Islanders, Koreans, and Filipinos were the most likely to be current smokers, at rates close to those of non-Asians. The Chinese and Southeast Asians were the least likely, at rates half those of Pacific Islanders.

Despite the wide variation in current smoking rates across Asian-American groups, from about one-fifth to one-quarter of smokers were daily smokers in all groups except Pacific Islanders, among whom the rate rose to 50 percent. Among non-Asian-Americans, about one-third of smokers were daily smokers. Koreans were slightly less likely to have proportionally as many daily smokers (20 percent) as were Pacific Islanders and Filipinos (25 percent). Although about 1 in 10 Chinese and Southeast Asians reported current smoking, 26 percent of Southeast

Asian smokers were daily smokers, the highest proportion among Asian-Americans. In contrast, the rate for Chinese smokers was only 16 percent, the lowest proportion.

Illicit Drugs

For illicit drugs, the same general pattern of group rankings held true, but some interesting variations are evident, especially in regard to the Pacific Islanders and Southeast Asians. Consistent with the findings for alcohol and tobacco, Pacific Islanders reported the highest rates for any illicit drug (16 percent), marijuana (23 percent), and inhalants (11 percent). These rates were close to those of non-Asian-Americans. However, Pacific Islanders reported relatively low rates of both cocaine and amphetamine use.

Southeast Asians moved into the midrange in use of any illicit drug and most specific drugs, reporting about the same rates as Filipinos. Southeast Asians ranked first in cocaine use and high in amphetamine use. This suggests a propensity to stimulant use, in contrast to a relative lack of interest in stimulants among Pacific Islanders.

The range in lifetime use of *any* illicit drug was pronounced: from 3.9 percent among Chinese and 6.7 percent among Southeast Asians to 31 percent among Pacific Islanders. Most other groups fell in the midrange. Rates for Pacific Islanders were close to those of non-Asian-Americans, but rates for all other Asian-American groups were much lower. Similar results are evident for any substance use. Japanese, Koreans, and Filipinos again fell in the midrange across specific illicit drugs. For inhalants, the range of use across groups was not great (7 to 11 percent) and was generally closer to that of non-Asian-Americans (11 percent). This finding adds further evidence that Asian-American youth may be relatively more prone to inhalant use.

First Drug Use and Alcohol Intoxication

Those Asian-American groups that reported the highest rates for illicit drug use and alcohol intoxication generally began these behaviors earlier than the other groups and closer to the age of initiation of non-Asians. By age 12, 13 percent of Pacific Islanders had experienced alcohol intoxication, compared with 18 per-

cent of non-Asians (table 6.9). Southeast Asians and Chinese reported rates about one-third lower than Pacific Islanders (4 to 5 percent). In the midrange were Filipinos (8 percent) and Koreans (11 percent). Initiation of illicit drug use by age 12 was reported by 9 percent of Pacific Islanders, almost the same rate as non-Asians (10 percent); in contrast, it was reported by less than 1 percent of the Chinese and Japanese, by only 3 to 4 percent of Filipinos and Southeast Asians, and by 6 percent of Koreans.

Summary

Although these analyses must be considered exploratory because of sample aggregation for some Asian-American groups, the results highlight the importance of expanding research on substance use beyond aggregate Asian-American categories to an examina-

Table 6.9. Percentages of 9th and 11th grade students reporting alcohol intoxication and illicit drug use at least once, by age and group, 1989 and 1991 California Student Substance Use Survey samples (combined)

Age (years)	Non-Asian *n* = 8,331	Chinese *n* = 314	Filipino *n* = 339	Japanese *n* = 56	Korean *n* = 83	Pacific Islander *n* = 92	Southeast Asian *n* = 119
				Alcohol intoxication			
11	10.3	3.2	5.1	7.2	2.4	5.5	3.3
12	8.0	1.6	2.7	7.1	8.4	7.8	0.8
13	12.2	1.3	8.6	3.6	9.6	10.0	0.8
14	10.5	1.3	6.8	8.9	7.2	8.9	0.8
15	7.2	2.9	5.9	0.0	1.2	7.8	5.9
16	3.7	1.6	2.4	0.0	1.2	5.6	0.8
Total	51.9	11.9	31.5	26.8	30.0	45.6	12.4
				Illicit drug use			
11	5.7	0.6	2.1	0.0	2.4	6.6	2.4
12	4.4	0.6	1.8	0.0	3.6	2.2	0.8
13	6.8	0.3	5.9	0.0	4.8	6.6	0.0
14	7.4	1.0	3.8	5.4	4.8	6.6	1.7
15	5.4	0.6	2.9	5.4	1.2	8.8	1.7
Total	29.7	3.1	16.5	10.8	16.8	30.8	6.6

Sources: Skager & Austin (1993); Bachman et al. (1991).

tion of specific Asian-groups. The results broaden our perspective by showing that some Asian-American subgroups are more drug, involved than others. They strengthen the conclusion that the stereotype of Asian-Americans as a model minority is an oversimplification.

Pacific Islanders were the most drug-involved group. Across drug categories this group's rates were equivalent to and sometimes higher than those of non-Asian-Americans. The major exception was for use of cocaine and amphetamines. Although the sample size was relatively small, the consistency of these results suggests that this is one group of Asian-American youth at relatively high risk of substance involvement. Given the evidence on gender differences, this finding is particularly interesting in that the Pacific Islander sample had the highest proportion of females (54 percent) other than the Southeast Asians.

At the other extreme, the Southeast Asians and Chinese consistently reported the lowest rates, less than half the overall prevalence rates of Pacific Islanders for alcohol drinking and cigarette smoking, and even greater differences for illicit drugs. There were, however, exceptions. Southeast Asians moved into the midrange for any illicit drug use, cocaine, amphetamines, and, to a lesser extent, marijuana. Although the Chinese and Southeast Asians reported similar rates of current smoking, Southeast Asians had the highest proportion of daily smokers; the Chinese, the lowest. The difference in stimulant use between Pacific Islanders and Southeast Asians is intriguing. Whereas Pacific Islanders appear to have a relatively low usage of stimulants compared with other illicit drugs, Southeast Asians appear to have a relatively high usage of them.

In contrast to these extremes, differences among Koreans, Filipinos, and Japanese were often small and not consistent. Results for the Japanese must also be considered very tentative because of the very small sample size. After Pacific Islanders, Filipinos and then Koreans were the most likely to be current smokers, at rates close to those of non-Asian-Americans. However, Koreans were slightly less likely to have proportionally as many daily smokers than either of the other two groups.

These group differences may account for some of the variation found in studies of Asian-Americans compared with Whites and other ethnic groups. The low use reported by Southeast Asians is consistent with the results of previous studies with samples of Hmong and Indochinese youth. Morgan et al. (1984) report on a community-based survey of San Diego Job Corps members conducted in 1981 that included a sample of Indochinese youth. The Indochinese of both genders had a lower rate of drinking in the past 6 months than Whites, African Americans, and Hispanic Americans. There were also significant gender differences. Two-thirds (66 percent) of Indochinese males, but only 43 percent of females, drank. Indochinese youth began drinking later than other groups. The small sample of Asian-Americans studied by Murray in the Twin Cities area of Minnesota, which reported very low use rates, were Hmong children who had lived in the United States for only a few years (Murray et al., 1987; Murray & Roche 1988).

Although the reasons for these differences are beyond the scope of this discussion, one factor may be acculturation, as indicated by place of birth. The groups with the highest percentage born in the United States were the Pacific Islanders and the Japanese (70 percent). At the other extreme, only 27 percent of Chinese, 22 percent of Koreans, and 21 percent of Southeast Asians were born in the United States. In the Twin Cities study, Murray and colleagues speculated that "it is possible that they still lived largely outside the social influences operating for most students in the sample." They added that "Considerably more research is needed to broaden the information base concerning drug use in these and other minorities" (Murray et al., 1987). However, acculturation does not explain the relatively high rating for marijuana compared with Whites. One factor that does not appear to account for these differences is gender. There were no consistent differences in the samples' gender composition related to these prevalence rates. Only two groups did not have more than 50 percent males in the sample: Pacific Islanders and Southeast Asians, the two groups with the greatest differences.

Use Trends

Survey data on trends in substance use are very limited and inconsistent. Some studies suggest that use has increased among Asians relative to other groups (Kim et al., 1992), but other data have indicated that it has not (Bachman et al., 1991). To assess whether any noticeable changes in substance use had recently occurred among Asian-Americans in California, the 6-month prevalence rates for the combined sample of 9th and 11th graders were compared across three CSS administrations between 1987 and 1991. In each of these surveys, Asian-Americans constituted about 10 percent of the sample; the number of respondents ranged from 560 to 640. The results (table 6.10) indicate that an upswing in use occurred among Asian-American youth between 1987 and 1991. This upswing appears related to a general upswing among older students.

Across most drug categories, use among Asian-Americans appears to have decreased between 1987 and 1989, and then re-

Table 6.10. Trends in substance use among Asian 9th and 11th graders (combined), by California Student Substance Use Survey year, 1987–1991

Substance	1987 Survey *n* = 560	1989 Survey *n* = 646	1991 Survey *n* = 586
Alcohol	33.2	28.6	35.7
Beer	40.5	35.1	43.1
Wine	40.7	36.9	42.5
Spirits	25.2	20.0	26.5
Any illicit drug	9.0	6.5	9.1
Marijuana	8.7	8.2	10.6
Cocaine	4.5	2.3	4.1
Amphetamines	2.9	2.0	3.9
Sedatives	10.0	7.3	8.0
Barbiturates	1.6	0.8	2.4
Inhalants	10.0	7.3	10.0
LSD	2.7	0.5	3.1

Note. The data shown are percentages of students who reported use in the previous 6 months.

Sources: Skager & Austin (1993); Bachman et al. (1991).

turned to 1987 levels in 1991. For example, rates for any alcohol consumption declined from 33 percent to 29 percent and then increased to 36 percent. Marijuana use rates remained at around 8 percent before rising to 11 percent. Slight increases also were found between 1989 and 1991 for use of amphetamines, cocaine, and LSD (up 2 percentage points). Consumption of other drugs remained stable or varied by only 1 percent (e.g., barbiturates, inhalants). Largely because of the increase in marijuana use, rates for use of any illicit drug use increased between 1989 and 1991 from 6.5 percent to 9 percent, the same level as 1987.

These results roughly mirror those found for the total CSS samples of 9th and 11th graders. Between 1985 and 1989, illicit drug use in that group steadily declined. Between the 1989 survey and 1991, slight increases occurred for marijuana, LSD, and inhalants. For most other illicit drugs, on the other hand, 6-month prevalence rates for any use remained stable or decreased marginally (generally less than 1 percentage point). Alcohol consumption rates declined between 1987 and 1989 and in 1991 returned to about 1987 levels. This indicates that the changes in consumption observed over time in the Asian-American sample do not differ substantially from those for the State as a whole. However, the increases among Asian-Americans for alcohol and marijuana appear to be slightly higher than those for students as a whole.

Conclusion

The state of knowledge about substance abuse among Asian-American youth remains extremely poor. The results of the few studies that have been conducted are often inconsistent and of limited value because of small samples, lack of attention to subgroup differences, and the changing demographics of the Asian-American population. Nevertheless, the findings from the CSS and other recent national, State, and local studies at least begin to provide a more substantial body of knowledge than has previously existed.

The findings reviewed here both confirm and call into question aspects of the popular stereotype of substance abuse among Asian-Americans. On the one hand, Asian-American youth con-

sistently reported much lower overall use prevalence rates than most other ethnic/racial groups, especially Whites and even non-Asian-Americans as a whole. This was particularly true for alcohol and marijuana. On the other hand, there is evidence to suggest that Asian-American youth who do drink are relatively heavy consumers. Moreover, Asian-American adolescents in several categories of use—notably cigarette smoking, stimulants, depressants, and hallucinogens—reported use equivalent to, or even higher than, that of African Americans. These findings belie the stereotyping of Asian-Americans as a low-risk population and African Americans as a high-risk population. Particular attention should be paid to use of cigarettes and illicit drugs other than marijuana among Asian-American youth. Recent trend data suggest that such use by Asian-American youth may be rising, possibly because of the same factors that are generating increases in use in the general student population.

A closer examination of the data beyond the aggregate category of "Asian-American" revealed important differences that need to be considered in developing and evaluating prevention programs. Asian-American female adolescents did often report the lowest use of any gender-ethnicity combination. Males were responsible for the heavy use that did occur. But for many drug categories, the stereotype of female Asian-American youth as abstinent does not appear to apply. Asian-American females reported higher rates than both Asian-American males and African-American females. Prevention programs need to target Asian-American girls as well as boys, particularly for cigarette smoking and stimulant use. However, the large gender differences in use that have been reported underscore the need for evaluators to examine how program components may differentially affect males and females.

Important differences also emerged across the six main Asian-American groups in the CSS. Although some of the samples were small, the results are highly suggestive and provide guidelines for future research. Pacific Islanders' rates were very close to, and at times higher than, those of non-Asian-Americans and markedly higher than those of other Asian-American groups.

Pacific Islanders particularly need to be targeted with prevention efforts. Because their higher prevalence rates were also associated with higher initiation rates by age 12, these efforts need to begin no later than the transition into middle school. At the other extreme, Chinese and Southeast Asians generally reported much lower prevalence rates. However, it appears that programs targeting Southeast Asians need to stress the dangers of using stimulants and illicit drugs other than marijuana. Japanese, Koreans, and Filipinos tended to fall in the midrange. Within this general pattern there were, however, exceptions that suggest possibly important variations in drug preferences and patterns of use that need to be targeted by programs.

It is thus evident that Asian-American youth are not immune to substance abuse problems. The challenge is to better identify the characteristics that place some Asian-Americans at high risk. Such information is needed to develop better prevention and intervention programs that target these at-risk youth. The danger of the model minority stereotype is that it can become a barrier to providing services to those groups and individuals within the Asian-American population who need services, and without these services their drug involvement and related problems may escalate. Indeed, this may explain the evidence that differences between Asian-Americans and other groups are not as pronounced among substance abusers as in general student samples.

It is equally important to continue exploring the putative moderation of Asian-Americans. Should this moderation be confirmed, determining the factors that account for it may contribute to the growing body of knowledge about protective factors and may aid in developing programs for other populations that will reduce their substance abuse risk. What are the reasons for the relatively low risk among Asian-Americans in general? Which of these factors might be generalizable to other ethnic/racial groups and promote the development of protective factors among them? The past tendency to discount the need for research on Asian-Americans because they are a "model minority" reflects a long-standing bias in substance abuse prevention research toward conducting "problem-oriented research." The growth of interest in protective factors may help eliminate this bias.

More specifically, these findings point to several other lines of investigation to pursue in program evaluations and other research on Asian-American youth.

First, research and program evaluations need to specify which Asian-American populations are being studied. In areas where multiple Asian-American groups reside, analyzing data by an aggregate "Asian-American" category may mask important group differences. It is important to assemble a better data base of information about specific groups, especially to help develop and evaluate programs and services targeting them. Evaluations of programs that do target specific Asian-American groups may play an important role in building up this knowledge.

Second, program evaluations need to extend beyond overall prevalence estimates to examine frequency and quantity of use as well as other patterns. Evidence suggests that even when Asians report overall prevalence rates lower than those of other groups, Asian-Americans who do use may be more drug involved than other users. It has been hypothesized that Asian-American youth who do use drugs may be characterized by a problem behavior syndrome precisely because they represent a minority among the Asian-American population that has failed to fulfill cultural expectations. As Kim et al. (1992) suggested, because of the model minority stereotype, "Asian-American youths who find a gap between what is expected of them and what they have actually achieved experience a high degree of emotional stress in their fear of failure, which they may try to relieve through use of alcohol and other drugs" (p. 217).

Finally, what are the consequences of use among those Asian-Americans who do become substance abusers? If Asian-American users may be at relatively high risk to become heavy users, one might expect that substance-related problems would be high among users while remaining low in the Asian-American population in general.

It must also be emphasized that all data presented here are derived from student surveys. Drug use has consistently been shown to be significantly higher among dropouts than among students. Because Asian-Americans have the lowest rates of school dropout, the differences in substance use between Asians and other

ethnic groups would likely increase in a general population survey that included out-of-school youth. However, very little research has examined how drug use differs among dropouts by ethnicity. What we know about ethnic differences in drug use among students may not apply as well to dropouts. Because of the stigma attached to dropping out within the Asian-American culture, Asian-American adolescent dropouts may be at particularly high risk for drug involvement and its adverse consequences.

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Endnotes

1. Johnston, O'Malley, & Bachman, 1994. Substance Abuse and Mental Health Services Administration, 1994a, 1994b. Prior to 1991, the household survey excluded Alaska and Hawai'i from the survey sample frames, thus eliminating an important source for Asian-Americans.
2. In recognition of this diversity, California law (Assembly Bill 814) stipulates that any State agency or contractor collecting population data must identify Asian-American respondents by 11 categories of Asian-American and Pacific Islander groups: Asian Indian, Cambodian, Chinese, Guamanian, Filipino, Native Hawaiian, Japanese, Korean, Laotian, Samoan, and Vietnamese.

3. See Chi, Lubben, & Kitano (1989); Kitano & Chi (1987, 1989); Kitano, Lubben, & Chi (1988); Lubben, Chi, & Kitano (1988, 1989). For Hawaiian research, see Ahern (1989); Danko et al. (1988); Hawai'i Department of Health (1979); Kitano, Chi, Law, Lubben, & Rhee (1988); Le Marchand, Kolonel, & Yoshizawa (1989); Murakami (1989); Schwitters, Johnson, Wilson, & McClearn (1982); Schwitters, Johnson, McClearn, & Wilson (1982); Wilson, McClearn, & Johnson (1978).
4. Unfortunately, subsequent State surveys of students in Hawai'i have not included ethnic group comparisons.
5. See also Kitano & Chi (1987, 1989); Kitano, Lubben, & Chi (1988); Lubben, Chi, & Kitano, (1988, 1989).
6. The existence of Alcoholics Anonymous groups for Japanese in Los Angeles suggests that some portion of the adult Japanese community suffers from drinking problems (Kitano & Chi, 1987; Kitano, Lubben, & Chi, 1988). In terms of heavy drinking, Koreans seem to drink on a level similar to that of Japanese Americans. Heavy drinking, especially among foreign-born Korean and Japanese Americans, is typical during business-related entertainment and after work in bars and nightclubs in New York, Chicago, Los Angeles, and Hawai'i (Kim et al., 1992).
7. For the Hawai'i research, see Ahern (1989); Danko et al. (1988); Hawai'i Department of Health (1979); Le Marchand et al. (1989); Murakami (1989); Schwitters, Johnson, McClearn, Wilson (1982); Schwitters, Johnson, Wilson, & McClearn (1982); Wilson et al. (1978). Because of their large numbers and the length of time they have resided on the island, Native Hawaiian-Asian groups are quite different from their mainland counterparts in terms of their nonminority status, acculturation, English language proficiency, community cohesiveness, social-political identification, and so forth (Kitano et al., 1988). This difference limits the comparability and generalizability of research conducted with these populations to mainland populations.
8. At State legislative hearings held in San Diego in the fall of 1989, witnesses testified that while drug use within Asian communities was not widespread, the problem was grow-

ing and would get worse unless action was taken to contain it. Witnesses mentioned that recently formed Asian-American youth gangs in San Diego would likely result in increased drug use and trafficking among Asian-American youth (California Senate, 1989). See also Seo (1995).

9. Research on Hispanic Americans has also indicated that acculturation-related differences in drinking are more evident among Hispanic-American women than among Hispanic-American men (Austin & Gilbert, 1989).
10. See Skager & Austin (1993); Skager, Austin, & Frith (1990); Skager, Fisher, & Maddahian (1986); Skager, Frith, & Maddahian (1989).
11. A total of 8,118 usable instruments was received; 34 (less than 1 percent) were eliminated because of improbable response patterns. A phony drug also was included in the survey to check response validity; less than 1 percent of respondents at each grade level indicated that they used this nonexistent substance. Eliminating instruments on the basis of improbably high patterns of substance use involved the application of rules based on at least a degree of subjective judgement. The cases eliminated were all characterized by reports of improbable frequent use of three or more substances. This procedure yields lower estimates of overall substance use than would have been the case if the instruments had not been culled.
12. The Mixed Race/Ethnicity category was added in 1991 because of California's multicultural population. Traditional breakdowns into major racial and ethnic categories are becoming too restrictive for California, given the realities of the State's shifting demographics and the emergence of significant numbers of young people who see themselves as of mixed identity, either racially or ethnically. Another reason for adding this category is that we hypothesized, on the basis of research on ethnic differences in substance use, that mixed ethnicity populations might be at greater risk for substance use. A relatively high percentage of survey respondents identified themselves as Mixed: 11 percent of 7th, 10 percent of 9th, and 7 percent of 11th graders. Furthermore,

they reported relatively high levels of use (Skager & Austin, 1993).

13. One exception to this was a series of reports by UCLA researchers of surveys conducted in Los Angeles and Ventura Counties in California in the late 1970s and early 1980s. Although Asian-Americans' rates were significantly lower than those of Whites, they were generally higher than those of African Americans and at times not significantly different from those of Hispanic Americans (Maddahian et al., 1986, 1988a, 1988b; Newcomb et al., 1987). However, the sample of Asian-Americans was very small (see table 5.1).
14. Even fewer studies have examined use of smokeless tobacco or "any tobacco product," but these studies indicate that differences between Asians and other groups are more pronounced than for cigarette smoking alone (Murray et al., 1987). Moor, Elder, Young, and Wildey (1989) examined the prevalence of "generic" tobacco use among Hispanic- American, White, African-American, and Asian-American youths in grades 4, 7, 10, and 12 in San Diego, California (n=4,980). The sample was 62 percent White, 20 percent Hispanic, 11 percent Asian-American (n=548), and 8 percent African American. Overall, the prevalence of regular use was lowest among Asian-Americans (13 percent), and highest among Whites (26 percent). These results for tobacco use in general may reflect the low rate of smokeless tobacco use among Asians. In a review of data reported to the Centers for Disease Control on adolescents' use of smokeless tobacco, Asians were found to have the lowest rates of use (Boyd, 1987).
15. Analyzing data from the 1983 New York student survey, Welte and Barnes (1985) determined that White, Asian-American, African American, and Hispanic American students tended to initiate the use of drugs in the following order: alcohol, marijuana, pills, and hard drugs. However, Asians and Whites alone also scored relatively high on the scale in which cigarettes followed alcohol in this sequence and on the scale in which over-the-counter medicines followed marijuana.

16. Asian male drinkers consumed 2.48 ounces of absolute alcohol per month, compared with .90 ounces for Whites. The rate for female drinkers was only .14 ounces for Asians, compared with .60 ounces for Whites (Barnes & Welte, 1986; Welte & Barnes, 1987). A similar pattern of drinking was observed in the 1974 National Adolescent Drinking Survey. Although Asian-Americans ranked second in the percentage of abstainers, among male drinkers Asians tied with Native Americans as the heaviest drinkers (25 percent). Heavy drinking was five times greater among Asian-American boys than among Asian-American girls, which was the largest male:female ratio of all the ethnic groups (Rachal et al., 1975).

7

Substance Abuse Among Pacific Islanders: Cultural Context and Implications for Prevention Programs

Noreen Mokuau, D.S.W.

Editor's Note: *This chapter highlights the importance of understanding the historical and cultural contexts that define specific populations of Pacific Islanders in order to develop successful health interventions for these diverse groups. Despite their vast differences, Pacific peoples share a common belief in the importance of affiliative relationships and the collective units of family, the community, and the environment. Affiliative relationships are a source of strength in Pacific Islander communities and can facilitate health promotion and disease prevention efforts.*

Health care professionals must find models that are sensitive to the cultural dynamics of each Pacific Islander group. Three program approaches that may be appropriate are the case management approach, the family orientation approach, and the empowerment approach.

Introduction

There has been increasing attention to substance abuse among ethnic/racial populations and a concurrent interest in developing and evaluating culturally competent prevention programs (Orlandi, Weston, & Epstein, 1992; Spiegler, Tate, Aitken, & Chris-

tian, 1989; Trimble, Padilla, & Bell, 1987). One ethnic/racial population, however, has generally been overlooked in the literature because of its small numbers and a scattered presence both in the islands of the Pacific and throughout the United States—the Pacific Islander population. Pacific Islanders are a culturally diverse group indigenous to the islands of Polynesia, Micronesia, and Melanesia. These islands spread across nearly 64 million square miles of the Pacific Ocean.

Emerging anecdotal and survey evidence suggests that serious substance problems exist for certain Pacific Islander groups (Ahern, 1989; Danko et al., 1988; Whitney & Hanipale, 1991; Zane & Sasao, 1990). The literature emphasizes that an understanding of cultural values and norms is necessary to facilitate effective prevention of substance abuse among these peoples. There is a critical need to increase the conceptual and empirical inquiry about substance abuse among Pacific Islanders.

This chapter examines the cultural context of substance abuse among Pacific Islander peoples and discusses implications for the design and evaluation of prevention programs. There is great diversity among and within the various groups of Pacific Islanders. While this chapter tries to capture and emphasize that diversity, it also focuses on providing a general profile of Pacific Islanders. The chapter includes discussions of Pacific Islanders in the United States as well in U.S.-Associated Pacific jurisdictions. The chapter is divided into four major areas: (1) a descriptive overview of Pacific Islanders, (2) patterns of substance use and abuse among these peoples, (3) explanations for the behavioral patterns of substance use and abuse, and (4) implications for prevention program design and evaluation.

A Descriptive Overview of Pacific Islanders

Pacific Islander peoples are from three major land areas commonly known as Polynesia, Micronesia, and Melanesia. There are thousands of islands in this geographical region. New Zealand, Tonga, Tahiti, American Samoa, and Hawai'i make up the major island geography of Polynesia; the Gilbert Islands, Guam, the Common-

wealth of the Northern Mariana Islands, the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau form the major land mass of Micronesia; and Papua New Guinea, Fiji, New Hebrides, New Caledonia, and the Solomon Islands make up the major land areas of Melanesia. The United States maintains formal political associations with peoples from Polynesia and Micronesia, but not Melanesia. The following overview focuses on the island peoples who are politically affiliated with the United States through statehood, territorial or commonwealth status, and free association status. This group includes people in the Polynesian islands of Hawai'i and American Samoa and peoples in five Micronesian island entities: Guam, the Federated States of Micronesia, the Republic of the Marshall Islands, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau (see table 7.1).

Table 7.1. United States relationships with Pacific Islands: Political association and geographic information

Pacific Island Group	Political Association	Land Area (mi^2)	No. of Islands
Hawai'i	State	6,425	8
American Samoa	Territory	77	7
Guam	Territory	209	1
Federated States of Micronesia (Chuuk, Kosrae, Pohnpei, Yap)	Freely associated state[a]	279	607
Republic of the Marshall Islands	Freely associated state[a]	70	1,225
Northern Mariana Islands	Commonwealth	182	21
Republic of Palau	Freely associated state[a]	179	350

Note. Data are from *Atlas of Hawai'i* (1980) and U.S. Congress, Office of Technology Assessment (1987).

[a]Free association status refers to semi-independent/quasi-sovereign status in regard to the United States.

Polynesia

The two largest Pacific Islander groups in the United States are from Polynesia: Native Hawaiians (211,014) and Samoans (62,964) (McKenney, 1991). Native Hawaiians[1] tend to reside in the state

of Hawai'i (138,742), but a substantial number live in California (34,447) (Harrison, 1991). The majority of Samoans also reside in California (31,917) and Hawai'i (15,034) (Harrison, 1991). There has been an increasing migration of Samoans[2] to the United States since the 1950s (Mokuau & Chang, 1991), and there are now more Samoans in the United States (46,773) than in the territory of American Samoa (U.S. Department of Commerce, Bureau of the Census, 1991a). In maintaining territorial status, Samoans are recognized as American nationals and are thereby allowed to travel freely within the United States.

Micronesia

Five Micronesian island jurisdictions are associated with the United States: the territory of Guam, the Federated States of Micronesia (Chuuk, Kosrae, Pohnpei, and Yap), the Republic of the Marshall Islands, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau (University of Hawai'i School of Public Health, 1991). Depending on their political affiliations, some of these Pacific Islanders maintain American national status and others retain their own national citizenship but are allowed to travel freely in the United States.

Guamanians or Chamorros are the third largest Pacific Islander group in the United States (49,345). Most reside in California (25,059) and Hawai'i (2,120) (Harrison, 1991; McKenney, 1991). In the territory of Guam, there are 133,152 residents (U.S. Department of Commerce Bureau of the Census, 1991b); most are of Chamorro ancestry but there are also Filipinos and Whites. While the terms Guamanian and Chamorro are now used synonymously by the residents of Guam, it is important to highlight the distinctions (Untalan, 1991). Guamanian refers to all residents of Guam, whereas Chamorro refers to the indigenous people of that island.

Determining the population census of other Pacific Islander groups in the United States is difficult because of their small size. Hawai'i is one State in which their numbers can be identified. In Hawai'i, Micronesians (excluding Chamorros of Guam) constitute an extremely small part of the population (1,848) (Asian and Pacific Islander Data Consortium, 1992). Census information with

regard to their numbers in their homelands is more readily available. The four entities constituting the Federated States of Micronesia—Chuuk, Kosrae, Pohnpei, and Yap—have the largest number of people (101,108). Next is the Republic of the Marshall Islands (46,020), followed by the Commonwealth of the Northern Mariana Islands (43,345) and the Republic of Palau (15,122) (University of Hawai'i School of Public Health, 1991; U.S. Department of Commerce Bureau of the Census, 1991c, 1991d) (see table 7.2).

Table 7.2. Population census of Pacific Islanders in the United States and U.S.–associated Pacific jurisdictions

		U.S. Jurisdictions in the Pacific	
Pacific Islander Group	**U.S. Census**	**Census**	**Pacific Region**
Hawaiians	211,014	—	
Samoans	62,964	46,773	American Samoa
Guamanians/Chamorros	49,345	133,152	Guam
Chuukese, Kosraen, Pohnpeian, Yapese	—	101,108	Federated States of Micronesia
Marshallese	—	46,020	Republic of the Marshall Islands
Chamorros and Carolinians	—	43,345	Commonwealth of Northern Marianas
Paluans	—	15,122	Republic of Palau

Note. Data are from Harrison (1991), McKenney (1991), University of Hawai'i School of Public Health (1991), and U.S. Department of Commerce, Bureau of the Census (1991a, 1991b, 1991c, 1991d).

An Emphasis on the Collective Unit in the Context of Diversity

The variations in geographic location, population census, and political affiliation hint at the cultural diversity that exists among these Pacific peoples. There are vast differences in historical backgrounds, languages, cultural norms, and lifestyle practices. For example, in the islands of Micronesia, at least 12 different languages are spoken, each associated with distinct cultural patterns (University of Hawai'i School of Public Health, 1991).

Within this context of diversity, there is a singular perspective among all Pacific Islanders regarding the importance of affiliative

relationships. This perspective emphasizes the importance of the collective unit, whether it is the nuclear or extended family, the community, or the environment (Hezel, 1989; Mokuau & Tauili'ili, 1992; Untalan, 1991). People of this region define self-determination in terms of collective affiliation rather than individualism (Ewalt & Mokuau, 1995). Lieber (1990) suggests that the Pacific Island identity is "a locus of shared biographies: personal histories of people's relationships with other people and other things." Implicit in this perspective are the values of cooperation and harmony.

Descriptions of Pacific Islanders reveal a richness inherent in their diversity and a shared and unifying perspective on people and the nature of their relationships. However, this rich cultural heritage has not protected Pacific Islanders from stressors and from substance abuse.

Alcohol and Drug Abuse Among Pacific Islanders

The literature on the use and abuse of substances by Pacific Islanders is limited. There is some survey information that examines the patterns of substance abuse among Native Hawaiians. Information on other Pacific Islander groups exists, but it tends to be anecdotal.* This section reviews the literature as it pertains to Western-introduced substances, to alcohol, and to two Pacific island substances—kava and betel nut. A brief discussion on the abuse of other drugs is woven into the section.

*Editor's Note: The Center for Substance Abuse Treatment of the Substance Abuse and Mental Health Services Administration is in the process of completing needs assessments and epidemiological studies on substance use/dependence in the U.S. Associated Pacific. Please contact the National Clearinghouse for Alcohol and Drug Abuse Information (1-800-729-6686) for information.

Native Hawaiians

The accumulated evidence on alcohol and drug abuse among Native Hawaiians suggests that this population abuses substances frequently. Most of the literature focuses on alcohol abuse, although some information on smoking and the use of marijuana is also available. All information is drawn from samples in the multicultural State of Hawai'i

Alcohol

A statewide survey assessing health risk factors among the people of Hawai'i revealed that Native Hawaiians are at greater risk for death and disability resulting from alcohol abuse than are other Asian-American and Pacific Island populations (Chung, 1986; Tash, 1987). Eight ethnic/racial groups were identified in the survey. Native Hawaiians, African Americans, and Whites had the highest frequencies of acute drinking (having five or more drinks on one occasion, once or more in the past month) as well as chronic drinking (having an average of two or more drinks a day during the past month). Drinking was found to be more frequent among men and among the young, those aged 18 to 24 years.

Other more recent studies support findings from the statewide survey (see a review of studies in Ahern, 1989, and Austin, Prendergast, & Lee, 1989). The highest proportion of drinkers was found among both Native Hawaiian and White males. Murakami (1989) noted that a large proportion of Native Hawaiians continue to consume moderate to heavy amounts of alcohol even though they experience problems with families, employers, or the law. Native Hawaiians tend to consume beer and Whites drink wine and spirits (LeMarchand, Kolonel, & Yoshizawa, 1989).

In addition to alcohol consumption, admission rates to alcohol-related treatment facilities can be used as an indicator of alcohol abuse. Ahern (1989) and Murakami (1989) imply that this measure may be inappropriate for Native Hawaiians because they tend to underutilize alcohol-related treatment facilities. Underutilization of these facilities is not indicative of low alcohol abuse for Native Hawaiians, but reflects these facilities' lack of sensitivity and poor responsiveness to Native Hawaiians. Prizzia

and Mokuau (1991) suggested that many mainstream social services are not used by Native Hawaiians because these services fail to take into account Native Hawaiian values and traditions.

Drugs

Two studies provide some evidence that use of illicit drugs exists among Native Hawaiians. In a survey of Hawai'i high school students, the highest levels of drug use were found among Native Hawaiians and Whites (Anderson & Deck, as cited in Austin et al., 1989). In a survey of five ethnic groups in Hawai'i, it was discovered that Native Hawaiian and Caucasian adults had higher rates of illicit drug use than did Japanese, Chinese, and Filipinos (McLaughlin, Raymond, Murakami, & Goebert, 1987). Drugs included in the survey by McLaughlin et al. (1987) were barbiturates, marijuana and hashish, inhalants, LSD, PCP, amphetamines, cocaine, methadone, heroin, pain drugs, and tranquilizers. Lifetime use of all drugs except tranquilizers was found to be higher among Native Hawaiians than Japanese, Chinese, and Filipinos.

Drug information extrapolated from studies on law violations and prison populations reinforces previous documentation on Native Hawaiians. In Hawai'i, the typical drug offender was White and male; however, Native Hawaiian males were found to rank second in the number of drug offenses (State of Hawai'i Department of the Attorney General, 1989). Marijuana was the predominant detrimental drug used by State offenders.

A recent study by Chandler and Kassebaum (1991) on alcohol and drug use among Hawai'i's adult prison populations revealed that marijuana was the drug of choice for Native Hawaiian inmates. However, the authors also noted that multiple (poly) drug use was the most frequent pattern in this population. Persons in these prison facilities reported using marijuana as well as alcohol or other illicit drugs such as cocaine.

Finally, with regard to tobacco use, the statewide survey on health risk factors in Hawai'i indicated that Native Hawaiians and Whites had the highest rates of smoking and that men were at higher risk (Chung, 1986; Tash, 1987).

Samoans

The documentation on alcohol and drug abuse among Samoan peoples is scant. However, a few reports exist that suggest that substance abuse may be a problem for this population in Hawai'i, California, and American Samoa. In particular, abuse of alcohol is highlighted and some information on marijuana, tobacco, and kava is also noted. In a statewide survey conducted to track substance abuse among Hawai'i's populations, Samoans, Native Hawaiians, Portuguese, and Koreans were found to be at high risk for alcoholism, smoking, and use of marijuana and other drugs (Pleadwell, 1992). A report suggests that alcohol and drug abuse also occur among Samoans in California (Lindo, 1989). Drugs commonly used by Samoans include crack cocaine and marijuana. Samoans, like Native Hawaiians, do not readily utilize drug rehabilitation clinics and programs (Lindo, 1989).

Whitney and Hanipale (1991) found that 100,000 gallons of beer were sold in American Samoa in 1986. With an adult population of about 18,000 in 1986, this means nearly 22 gallons per capita per year (Keener, as cited in Whitney & Hanipale, 1991). Alcohol use and abuse in American Samoa is associated with men more than women and occurs primarily among the young (those aged 14 to 25). The alcoholic beverage of choice appears to be beer.

A drug sometimes used in the islands of Polynesia is kava, which is made from the root of a pepper plant (Takeuchi, 1989). Kava is typically consumed as a beverage and usually produces a state of relaxation (Marshall, 1987). Kava is used in American Samoa in modern times for special rituals, celebrations, and medicinal purposes (Calkins, 1962; Whitney & Hanipale, 1991). There are no contemporary accounts of abuse of this drug.

Other Pacific Islanders

In general, the substance abuse patterns of other Pacific Islander populations in the United States are unknown.* However, recent reports suggest that drinking is a growing problem in Micronesian communities in the Pacific Islands. The patterns of drinking alcohol and sakau (the Micronesian name for Kava) vary across Micronesian communities. In addition, betel nut is used in parts of Micronesia.

* Editor's Note: Recent surveys have indicated that methamphetamine and inhalants are emerging problems in the U.S. Associated Pacific Basin. For further information, please contact the National Clearinghouse on Alcohol and Drug Information (1-800-729-6686).

The use of alcohol has been incorporated into major community events in Yap (of the Federated States of Micronesia), in the Republic of Palau, and to a lesser extent in the Republic of the Marshall Islands. Francis Hezel (n.d.) provides an account of the use of alcohol:

> *In Yap, alcohol is widely served at village feasts, weddings and funerals.... Beer is becoming a part of the ritual of hospitality in the [Yapese] villages.... In Palau, drinking has become a standard part of virtually every large community event.... The Marshalls, with its large Protestant population and long tradition of church opposition to drinking, has not incorporated alcohol into community events to the same degree as the other islands... [however] on the settlements of Majuro and Ebeye alcohol is used in community celebrations.*

In addition to social drinking at community events, recreational drinking also occurs. Marshall (1979) stated that many young Micronesian males (aged 18 to 30) engage in weekend drinking because a public display of drunkenness is a marker that a young man has come of age (*anuon*). While more women are beginning to drink, it is still a predominantly male activity.

On other islands, such as Kosrae and Pohnpei of the Federated States of Micronesia, alcohol is not used to a great degree in community events, but kava/sakau is (Hezel, 1989; Takeuchi, 1989). Takeuchi (1989) found that sakau is the drink of choice among Pohnpeians because it turns the body numb and keeps the mind clear. Associated with at least 30 different ceremonies, sakau is an integral part of the culture.

The chewing of betel nut is found in Guam, in Yap, in the Republic of Palau, and in some islands of the Commonwealth of the Northern Mariana Islands (Marshall, 1987; Pinhey, Workman, & Borja, 1992). Betel nut is a member of the palm family and is one of the most widely used mind-altering substances in the world

(Lee, 1990). According to Marshall (1987), betel nut is the most widely used drug after nicotine, ethanol, and caffeine. Betel nut chewing depresses the central nervous system and paralyzes muscles (Lee, 1990).

The chewing of betel nut does not appear to be restricted by gender or age. A recent study of women's use of betel nut in Guam discovered that Chamorro and Filipino women of different ages indulged in the practice (Pinhey et al., 1992). The authors stated that although females on Guam are less likely than males to drink alcohol, their use of tobacco and betel nut may be increasing.

Generalizations About Substance Use and Abuse Among Pacific Islanders

A review of the literature on substance use and abuse among Pacific Islanders provides preliminary information that permits some broad generalizations:

- The drinking of alcohol among Pacific Islanders is more closely associated with males than with females.
- The drinking of alcohol among Pacific Islanders is more closely associated with young populations.
- Beer seems to be the alcoholic beverage of choice for many Pacific Islanders.
- Pacific Islanders (Native Hawaiians, Samoans) underutilize alcohol-related facilities.
- The drinking of kava or sakau among Pacific Islanders (Samoans, Pohnpeians, Kosraeans) is also more closely associated with males than with females.
- Alcohol and kava or sakau are used for festive and celebratory occasions, but kava (sakau) is also used for rituals or even medicinal purposes.
- The chewing of betel nut among Pacific Islanders (Chamorros, Palauans, Yapese) may occur among males and females, and young and old.
- There is preliminary documentation that other drugs, such as marijuana, cocaine, and crack cocaine are being used by Pacific Islanders (Native Hawaiians, Samoans) in the United States.

Explanations for Substance Abuse by Pacific Islanders

Kim, McLeod, and Shantzis (1992) and Kim, Epstein, and Orlandi (chapter 2 of this volume) have identified three conceptual models that are useful in explaining alcohol and other drug-using behaviors among Pacific Islanders. These models emphasize the importance of sociocultural factors in behavioral patterns and underscore the need to understand the impact of oppression and racism on ethnic/racial peoples. The three models are the cultural content model, the cultural conflict model, and the cultural interaction model. All have some relevance for understanding the behaviors of Pacific Islanders, but the cultural content and the cultural conflict models have special applicability.

The cultural content model says that variations in substance-abusing behaviors can be explained by the different values and norms that govern various cultural groups. The cultural conflict model assumes that substance-abusing behaviors are influenced by conflicts that occur during adjustment to mainstream cultures. The cultural interaction model focuses on substance use as an effect of adaptation to Western mainstream culture. The assumption is that an ethnic/racial population is adapting through acculturation or cultural identification. For all Pacific Islanders, except Native Hawaiians and possibly Samoans and Guamanians or Chamorros residing in the United States, the concept of adapting to a mainstream culture seems perhaps less appropriate because these groups tend to reside in their natural habitat and might experience less exposure to Western culture. Clearly, the proliferation of technology into the homes of indigenous peoples will serve to hasten the adaptation process.

Cultural Content

A focus on certain cultural characteristics can facilitate our understanding of substance-abusing behaviors among Pacific Islander groups. The drinking of alcohol among Pacific Islander males occurs in specific circumstances—primarily festive or celebratory occasions in which social relationships are empha-

sized. Whitney (1986) stated that Native Hawaiian males drink in three major contexts: (1) after work (*pau hana*), (2) during group activity (e.g., working on the car or surfing), and (3) during family or community celebrations (*lu'au* or *ho'olaule'a*). Thus, drinking is related to the completion or achievement of a task, activity, or experience. It signals a time to relax and enjoy. Food often accompanies the alcohol (predominantly beer), and men leisurely exchange stories and use this time for male bonding.

The contemporary pattern of alcohol consumption as a predominantly male activity appears to have some origins in the pattern of drinking the traditional *'awa* plant during ancient times. There is evidence from Hawai'i's history that drinking 'awa (kava / sakau) occurred among the male chiefs (*alil'*) and the priests (*kahuna*). Supposedly, 'awa was the food of the gods and served as a direct link to ancestral spirits (Alama & Whitney, 1990). "Women were allowed to use it only for medicinal purposes and male commoners were allowed to use only lower-status varieties of the 'awa plant" (Alama & Whitney, 1990, p. 3). Excessive drinking may have occurred among chiefs and priests, but not in the general population.

The importance of socialization is noted in Native Hawaiian culture as well as in Samoan culture. In American Samoa, Whitney and Hanipale (1991) found that young males follow a pattern of drinking that moves through a series of stages: (a) "connections" or getting to know each other; (b) "daring entertainment" or activities such as singing, playing cards, and challenging one another; (c) "philosophical intimacy" or a serious discussion of significant issues; and (d) "break-up" which can mean dispersement or fighting. Food may not be present during the drinking sessions, and this could account for an increase in aggression and frequent fighting. Samoan men drink because it makes them feel strong (*fia malosi*) and happy (*fiafia*) (Whitney & Hanipale, 1991).

Drinking alcohol in Micronesian islands such as Yap and Palau or drinking sakau in other islands, such as Pohnpei and Kosrae, is also involved in socialization of males. Hezel (n.d.) suggested that male participants look on drinking as something akin to a rite of passage into adulthood. There is opportunity to find ac-

ceptance among peers through drinking behaviors. While certain segments of the community may not approve of excessive drinking, there are no enforced restrictions to hamper the practice. Marshall (1987) stated that the striking thing about sakau drinking is that it is generally restricted to men, whereas smoking tobacco and chewing betel nut are acceptable across gender lines.

Cultural Conflict

Alcohol- and other drug-abusing behaviors of Pacific Islanders may be influenced by circumstances of cultural conflict. Pacific peoples currently experience problems associated with a history of oppression and racism, alienation from the mainstream culture, identity conflicts, generational conflicts, and a sense of powerlessness—problems that may contribute to substance-abusing behaviors. It is instructive to review the historical context of these peoples in order to understand the origins of their cultural conflict.

The histories of these island peoples depict colonization by countries (England, France, Germany, Japan, Spain, and the United States) that have struggled for control of the Pacific. The United States' interest in the Pacific Islands derives from their strategic location as military bastions. These islands were perceived as being critical to military security during World War II and were the grounds for devastating battles. Because American policy in the Pacific Islands has been guided more by political power than by economic discovery (Ogan & Kiste, 1987), it has been typical to impose Western values and norms on these diverse cultures. These rapid changes have led to a deterioration of traditional values, norms, and lifestyle practices in the Pacific. Perhaps one of the most insidious influences brought into the Pacific Basin by Westerners has been alcohol (White & Murase, 1982). Alcohol can be directly or indirectly linked to a multitude of problems that lead to further deterioration of traditional cultures.

Souder (1992) contended that contemporary traditional cultures are threatened as never before by the homogenizing effects of modernization. Throughout Polynesia and Micronesia, Pacific Islanders are struggling for meaning and identity as they move beyond colonization. Many indigenous people, such as the Chamorros on

Guam, are confronted with skepticism and a colonial legacy that has called their cultural authenticity into question.

It becomes apparent in reviewing the histories of Pacific peoples that the issue of adjustment takes on special meaning. For Pacific Islanders in their indigenous environments, adjustment does not mean fitting into a new culture that they have chosen. Rather, it means struggling to maintain indigenous values, norms, and practices in one's own homeland in the context of forced assimilation to foreign ways.

The circumstances of Native Hawaiians are illustrative. Since 1778, Western contact has meant the loss of language, religion, education, economic and government systems, and, as a result of exposure to Western diseases and vices, depopulation for Native Hawaiians in Hawai'i (Stannard, 1989). Native Hawaiians have become increasingly alienated and disenfranchised in their own homeland. A litany of health, economic, social, and psychological problems confront contemporary Native Hawaiians (Blaisdell & Mokuau, 1991). The year 1993 was the centennial of the illegal overthrow of the Native Hawaiian monarchy, and many Native Hawaiians viewed this historical marker as a symbolic stimulus to renew struggles to maintain indigenous ways and reassert self-determination. For many Native Hawaiians, self-determination is inextricably linked to sovereign nation status.

It is possible to generalize from the circumstances of Native Hawaiians to those of other Pacific Island groups. For groups that reside in the islands such as the Chamorros of Guam and the Mariana Islands (Untalan, 1991), the Trukese (Hezel, 1985), and the Palauans (Polloi, 1985), there is evidence of a breakdown in indigenous cultures after Western contact. The rising social pathology in these island communities, which has almost reached crisis proportions, is symbolic of unchecked, externally imposed cultural change (Souder, 1992).

"Maladjustment" exists for many Micronesian communities because of the chaos brought on by rapid social change (Hezel, 1989). American ways are introduced without adequate attention to the preservation of indigenous cultural values and norms. The difficulties experienced by many Micronesian groups in adjusting to American influence have been manifested in a complex ar-

ray of problems such as identify conflicts (Blaisdell & Mokuau, 1991; Untalan, 1991), generational conflicts (Hezel, 1989), and peer pressure (Hezel, 1989). These problems have been linked with substance-abusing behaviors (Kim et al., 1992). The people of Micronesian islands recognize that while they cannot prevent modernization and rapid change, the retention of many indigenous ways is pivotal to their survival and can contribute to positive adaptation.

High-Risk Status

Pacific Islanders, like other ethnic/racial groups, face serious social and economic inequities stemming from a history of oppression and racism. The litany of problems for Native Hawaiians, Samoans, and Guamanians and Chamorros, the three largest Pacific Islander groups in the United States, includes poverty, poor health, and psychosocial difficulties.

Many Pacific Islanders residing in their own homelands are vulnerable because they lack control and power over their own destinies. Multiple risk factors such as high levels of unemployment or underemployment; low educational attainment; and increasing rates of suicide, domestic violence, and crime exacerbate and contribute to problems of alcohol and drug abuse.

One way of enhancing the resiliency of people who have multiple problems and are considered to be at high risk for substance abuse is through the promotion and preservation of cultural identity, values, and traditions. The richness of Pacific Island cultures can be infused into programming and evaluation to strengthen efforts to decrease alcohol and drug abuse.

Implications for Designing and Evaluating Culturally Competent Prevention Programs for Pacific Islanders

Prevention programs serving Pacific Islanders can be enhanced if the design and evaluation of such programs are predicated on cultural responsiveness and cultural competence.

Cultural competence refers to the set of academic and interpersonal skills that allow individuals to increase their understanding and appreciation of cultural differences and similarities within, among, and between groups (Center for Substance Abuse Prevention [CSAP], 1993, p. vi).

CSAP (1993) has identified several premises that characterize the design, implementation, and evaluation of culturally competent programs (see table 7.3). These premises can be incorporated into the variety of program approaches for Pacific Islanders. Decisions about program design and evaluation can be made on the basis of alcohol- and drug-abusing behaviors of Pacific Islanders.

Table 7.3. Premises of a culturally competent program

The design, implementation, and evaluation of culturally competent prevention programs might be guided by the following premises.

- Acknowledgment of a culture as a predominant force in shaping behaviors, values, and institutions.
- Acknowledgment and acceptance of cultural differences that exist and that have an impact on service delivery.
- The belief that diversity within cultures is as important as diversity between cultures.
- A respect for the unique, culturally defined needs of various client populations.
- The recognition that the concepts of family, community, and so forth are different for various cultures and even for subgroups within cultures.
- An understanding that people from different racial and ethnic groups and other cultural subgroups are usually best served by persons who are a part of or in tune with their culture.
- The recognition that taking the best of both worlds enhances the capacity of all.

Source: Center for Substance Abuse Prevention (1993).

Program Design: Approaches Appropriate for Pacific Islanders

Several program approaches may be appropriate for Pacific Islanders. These approaches have elements that in some way match or fit the circumstances and cultural dynamics of Pacific peoples. These approaches include the case management approach, the

family-oriented approach, and the empowerment approach (Kim et al., 1992; Kim, Epstein, & Orlandi, chapter 2 of this volume). Collectively, these three approaches ensure attention to the individual, the group or family, and the community.

Case Management Approach

Case management is the systematic arrangement of formal and informal resources to support and enhance the functioning of an individual or group of persons. The basis of such an approach is the linking of people to a diverse array of needed resources and the delivery of services in a timely fashion (Zastrow, 1992). The case management approach stresses the participation of the individual or group in the planning process, the coordination of services within a community network, and the accomplishment of tasks in a cost-effective way (Fiene & Taylor, 1991).

Native Hawaiians and Samoans in the United States experience an array of problems that negatively influence their quality of life. For Micronesian peoples living in their island homelands, the problems are just as pervasive. The vulnerability of Pacific Islanders to other problems as well as substance-abusing behaviors implies that prevention programs be designed to serve a wide range of needs. One specific example relates to the increase in rates of dual diagnosis among Pacific Islanders—diagnoses of both mental illness and alcohol and drug addiction (Chandler & Kassebaum, 1991; Territory of American Samoa, 1991). Utilization rates for prevention programs can be enhanced if efforts are expended to coordinate services for people with multiple problems.

One critical underpinning of the case management approach is its emphasis on integrated or holistic helping. Such an approach is compatible with Pacific Islander peoples, who view all things in life as being interconnected and who cherish strong affiliative relationships. In contrast, a typical approach used in the United States is based on a specialization of services that dehumanizes and compartmentalizes the recipients of such services.

Family-Oriented Approach

A family-oriented approach gives the family a central role in identifying and resolving problems. It presumes that the family can

be a powerful stimulus for healing and growth. An important underlying premise is that the family is an interdependent system in which change of one member effects changes in other members. Family-centered approaches require participation of most, if not all, members of a family in an active problem-solving process.

Family patterns and forms are substantially affected by the culture in which they are located (Zastrow, 1992). Equally important, people's perceptions of problems and their strategies for resolution are value laden and culture based. In the case of Pacific Islander families, attention to both nuclear and extended family networks need to be addressed. Prevention programs that are family centered and compatible with Pacific Islander cultural values should ideally encourage utilization of services.

An important issue to consider is the phenomena of codependency, in which family members conceal the abuser and abusive behaviors. In Pacific Islander families in particular, codependency may be the result of a strong commitment to "take care of one's own" or a strong belief that family members' problems should be handled within the family. However, an understanding of this behavioral pattern is critical to solid intervention. For example, Whitney (1986) suggested that successful intervention with Native Hawaiians who have alcohol problems requires a recognition that families may be ambivalent about seeking help.

An integral part of the family-centered approach is the education of family members. Jacobs (1992) wrote that solutions to alcoholism in Micronesia lie in placing more emphasis on alcohol education. One way to prevent alcohol and drug abuse is to educate family members about symptoms, behavioral patterns, and their consequences.

Empowerment Approach

The empowerment approach promotes the self-determination of populations through grassroots community-based efforts (Kim et al., 1992). It is an approach that helps people recognize and make use of resources (people or ideas) by encouraging communities to draw upon the natural strengths inherent in all cultures (Green, 1982). The underlying assumption is that people can be empowered to help themselves.

At the core of the empowerment approach is the participation of people who will be the recipients of services. The involvement of indigenous leaders from Pacific Islander communities in the design, delivery, and evaluation of prevention programs could be beneficial to program outcomes. For example, White and Murase (1982) suggest that rather than beginning with large community forums in Micronesia, it would be better to foster discussion within village organizations, in school classrooms, and through topical presentations in the media.

The empowerment approach is timely and has merit for Native Hawaiians. The sovereign nation movement among Native Hawaiian people (Dudley & Agard, 1990) is based on values of cultural restoration and self-determination and functions primarily through the participation of Native Hawaiians. The energy generated during this movement in the 1990s can be attributed to a recognition by Native Hawaiian people that there are many Native Hawaiian cultural strengths, and that as a people they are entitled to self-governance and the creation of their own destinies. It is reasonable to believe that the empowerment approach could generate similar energy in prevention program designs and their evaluation.

Program Evaluation: Some General Ideas

A sound plan for program evaluation is directly linked to program design and development. The goals that were established during program development should translate into the evaluation outcomes. The broadest goal for any prevention program is the reduction of substance consumption. Related to that goal are other goals, such as changes in constituents' knowledge and attitudes. Kim et al. (1992) suggested that a gradation of outcomes can be expected: (1) changes in actual alcohol- and drug-using behavior, (2) changes in intentions to use alcohol and drugs in the future, (3) changes in the attitudinal makeup or high-risk syndromes that are related to the alcohol- and drug-using behavior, and (4) improvement in the knowledge base.

The evaluation plan addresses whether proposed outcomes were achieved. The background information on Pacific Islanders mandates two general recommendations for program evaluation:

1. *The evaluation plan should provide for the fullest participation of Pacific Islanders in all stages of the evaluation process.* Just as Pacific Islanders are involved in program design, they should also be participants in program evaluation. Often, evaluators are looking for outcomes that are compatible with agencies' goals. The involvement of indigenous peoples will ensure that outcomes reflect the needs of the indigenous community. Adherence to this principle is critical for Pacific Islander populations, whose histories have reflected imposition rather than integration.
2. *The evaluation plan should use evaluation instruments and measurement protocols that are sensitive and culturally competent for use with Pacific Islander peoples.* Many assessment tools have been developed and used with mainstream populations and may not be appropriate for culturally diverse peoples. These instruments need to be tested, adapted, and modified, or new instruments must be created for Pacific Islanders. In addition, data collection procedures, such as interviews with service recipients, must abide by culturally appropriate patterns of communication. The direct communication styles typically used with mainstream service recipients may not be as useful, or may be aversive, with Pacific Islanders, who value more indirect forms of communication.

Conclusion

There is an increasing awareness that substance abuse problems exist in Pacific Islander communities and that there is a need to expand the conceptual and empirical research on Pacific Islander substance use and abuse. Such a research base can enhance our understanding of problems in a cultural context as well as guide the development of effective prevention programs for Pacific peoples.

Several areas should be targeted in research on substance abuse among Pacific Islanders. First, the available literature focuses primarily on the population at highest risk—young men. It is becoming more evident that while women may not drink or use drugs to the same extent as men do, their involvement with sub-

stances is increasing (Ono, in press; Pacific Institute of Chemical Dependency, 1991; Pinhey et al., 1992). For Pacific Islander women in the United States, the increase in substance use may be related to a variety of factors, including self-identity, employment stresses, or difficulties in the home environment. For Pacific Islander women residing in their island homelands, the increase in substance use may be related to the impact of rapid social change and the resultant effects of family disintegration and chaos.

Second, there is a need to examine substance abuse issues across different Pacific Islander groups. It is risky to make generalizations about Pacific Islanders on remote islands in the Pacific on the basis of information gathered on Pacific Islanders who are citizens of the United States. Research must begin to make distinctions between Pacific Islanders who reside in the United States and those who reside in U.S. jurisdictions. Once these distinctions are made and are understood by researchers, substance abuse professionals, and program personnel, specific Pacific Islander groups can be more effectively targeted for substance abuse prevention. Most of the research reviewed in this chapter focused on the two largest Pacific Islander groups, Native Hawaiians and Samoans. While some attention was given to the substance abuse issues of other groups—such as the Chamorros of Guam, the Yapese and Kosraens of the Federated States of Micronesia, and the Palauans of the Republic of Palau—that information tended to be anecdotal and fragmented. It is critical that future work encompasses a more systematic research agenda in which the various Pacific Islander groups are identified and studied.

Finally, future research must consider and address intragroup variation in alcohol- and drug-abusing behaviors among Pacific Islanders. Generalizations are useful as overall guides to understanding people; however, it is vital that programs promote an understanding of diversity even within groups. Such an appreciation could lead to the development of appropriate prevention protocols.

A challenge for professionals in the field of substance abuse prevention is to seek further understanding of Pacific Island peoples and to demonstrate this understanding by providing prevention programs that are culturally competent. Such a commit-

ment will more likely ensure quality services that are responsive to the needs of ethnic/racial populations such as Pacific peoples. The noted Native Hawaiian teacher (*kumu*) Mary Kawena Pukui (1983) cites one proverb that captures this challenge:

Pupukahi i holomua.
Unite in order to progress.

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Endnotes

1. Native Hawaiians are the people indigenous to the islands of Hawai'i. A Native Hawaiian is "any individual who has any ancestors that were natives prior to 1778 of the area that is now the State of Hawai'i."
   Many ethnic groups have immigrated to the islands. The present population of Hawai'i is 1,108,000. It is estimated that 20 percent of the State population is Native Hawaiian.
2. Samoans in the United States come from American Samoa as well as from the independent nation of Western Samoa. The two Samoas have been subject to different forms and

varying rates of development. The discussion in this chapter focuses on the Samoans from American Samoa.

3. Hawai'i's population comprises many cultural groups. Over 60 percent of the population is of Asian and Pacific Islander descent. Asian-Americans include Japanese (247,486), Filipinos (168,682), Chinese (68,804), Koreans (24, 454), Vietnamese (5,468), Laotians (1,677), Thais (1,220), Asian Indians (1,015), and Cambodians (119). Pacific Islanders include Native Hawaiians (138,742), Samoans (15,034), Tongans (3,088), and Guamanians/Chamorros (2,120). Other major groups are Whites (370,000); African Americans (27,000); Hispanics (81,000); and American Indians, Eskimos, or Aleuts (5,000) (U.S. Department of Commerce, Bureau of the Census, 1991b).

8

E Hana Pono: Issues of Responsibility, Justice, and Culture in the Design and Practice of Prevention Programs for Pacific Islanders

Brian K. Ogawa, D.Min.

Editor's Note: *This chapter argues that culturally competent health care for Pacific Islanders must take into account the cultural concepts of "right behavior" (referring to group harmony, support, and well-being), "work for justice" (referring to the social and legal problems facing Pacific Islanders), and "strive for righteousness" (referring to one's connection to the homeland) and the strength these concepts represent. Primary health care providers and substance abuse prevention professionals must understand the historical context of Pacific Islander peoples and its impact on their current health and social conditions. Only then can they design and provide health services and prevention programs that are appropriate for Pacific Islander clients.*

Providers need not understand each Pacific Islander ethnic group, but they must be open-minded and prepared to understand the community within which they will provide services. Open-mindedness and flexibility will further improve the quality of health care for Pacific Islanders.

Introduction

Native peoples of the Pacific have suffered injury to their traditional culture and society as the result of intense colonization, global warfare, and opportunistic commerce and trade. The reclaiming of indigenous birthrights to land, the kindling of sovereignty movements, and the pronouncements of human rights tribunals, however, are evidence that Pacific Islanders are proclaiming renewed pathways to identity.

Symptomatic of the assailed heritage of Pacific Islanders is an externally generated but self-administered abuse of spirit and body. Insidious paternalism, political overthrows, or socioeconomic strangleholds create and maintain conditions conducive to maladaptation. Alcohol and drug abuse among Pacific Islanders, as in many other populations, represents the failure (intentional or not) of the dominant system to be inclusive; it also represents the inability of individuals to construct their lives despite exploitation, interference, and disregard. Prevention programs among Pacific Islanders must therefore be cognizant of and responsive to the interplay of personal responsibility, racial discrimination, and issues surrounding the preservation of culture. Thus, substance abuse prevention programs for Pacific Islanders must address individual accountability, historical context, and cultural context.

As the largest Pacific Islander groups in the United States, Native Hawaiians, Samoans, and Chamorros are highlighted in this chapter, although much of this discussion can be applied generally to related populations. The various meanings of the Hawaiian phrase *e hana pono* are presented as a paradigm for developing, understanding, and evaluating prevention programs. The first meaning, "right behavior," highlights the Pacific Islander emphasis on group harmony, support, and well-being. The second meaning, "work for justice," explains the social and legal problems facing Pacific Islanders, the haunting presence of the "ghost of inferiority," and the role of mentor systems. The third meaning, "strive for righteousness," captures the importance of peoples' relationship to their homelands and the search for cultural strengths.

Issues of Personal Responsibility: 'Right Behavior'

The Hawaiian expression e hana pono captures several ideas to be included in culturally competent programs. E hana pono's first meaning is "to do right," and the concept defines an individual's accountability. Across cultures, every person has an obligation to maintain group order and continuity. The realm of choices may differ but there is an expectation that each person will exercise judgment and discretion in balancing both individual desires and social mores through right behavior.

Kapu and Noa

Among Pacific Islanders, the traditional use of substances for medicinal, religious, festive, and celebratory purposes did not violate but rather highlighted prescribed boundaries of individual conduct. Minor intoxication within ritualistic practices was anticipated and accepted. Careful limits were developed.

For Chamorros of the Marianas, betel nut chewing and tuba drinking were culturally prescribed. Behavior was rigidly controlled through a well-defined sense of "being shameful," (*mamahlao*). Individuals who crossed the culturally accepted limits were labeled *taimamahlao* (being without shame) or *na'mamahlao* (one who causes shame). A caste system, clan pride, and clan rivalry prompted clan members to adhere to a strict code. Transgressors were ridiculed and might lose their standing in the clan. This sense of shame still shapes culturally accepted behavior among contemporary Chamorros. Substance abusers are labeled taimamahlao and na'mamahlao (Souder, 1992).

Prior to Liholiho's removal of *kapu* (the strict regulation of behavior, from mundane daily activities to ceremonial behaviors), Native Hawaiian women could use *'awa* (kava, *Piper methysticum*) only for medicinal purposes. Commoners were allowed to use only lower quality plants. The use of 'awa was reserved primarily for *kahunas* (priests) and the *ali'i* (royalty) while making offerings to the gods or *aumakuas* (ancestral demigods) or welcoming guests, or at a time of war (Alama & Whitney, 1990).

Na aumakua o ka po,	*Gods of the night,*
Na aumaku o ke ao,	*Gods of the daylight,*
Eia ka 'awa.	*Here is your kava.*

The general population in ancient Hawaiian society could not partake of 'awa for recreational purposes. Addiction was unknown among the general population but was known to occur among kahunas and the ali'i. As Alama and Whitney (1990) wrote:

> *. . . the behavior surrounding its use expressed the Polynesian preoccupation with rank and, as a valued cultural commodity, its supply was closely regulated by chiefly proscription. This chiefly control meant that the population as a whole was not at risk for 'awa addiction; however, this same regulation meant that the ali'i and kahuna classes were subject to the risks inherent in situations where psychoactive drugs are easily available to a small segment of the population.*

The lifting of the kapu system and the introduction of *'awa haole* (alcohol) led to confusion about what was *noa* (unrestricted) and precipitated the need for new standards of behavior (Alama & Whitney, 1990). According to Orlandi (1992), "reciprocal determinism" is the process by which an ethnic group's shared norms, beliefs, and expectations about substances and their effects shape not only the group members' substance use habits per se, but also the ways in which the members behave while intoxicated and their perceptions of personal and collective responsibility for the outcomes of substance use.

When intoxication becomes a ritual in itself, is haphazard, and is allowed to infringe upon the lives of others, the traditional boundaries for the use of 'awa have been exceeded. A return to kapu is neither possible nor desirable. An important aim of any substance abuse prevention program should be directed to restore the sense of personal obligation and commitment to a workable social order that is at the core of traditional Pacific Islander lifeways.

Group Harmony

Decisionmaking and behavior among Pacific Islanders are customarily shaped by their contribution to group harmony, not by

self-fulfillment or self-aggrandizement goals (Whitney, 1987). Sue's paradigm of internal/external loci of control and the internal/external loci of responsibility presents, of course, a more complicated portrayal (Sue, cited in Pedersen, Fukuyama, & Heath, 1989). Oppressive societal forces and individual powerlessness versus personal action and personal responsibility, and combinations and degrees of each, make for interesting discussion. The "worldview" of Pacific Islanders is based on the group's ability to maintain and flourish rather than individual displays of successes and skills. Consider these two Hawaiian admonitions (Pukui, 1983, p. 14):

Ho'okahi e po'ino, pau pu i ka po'ino.	*One meets misfortune, all meet misfortune.*
Ho'okahi 'iliwai o ka like.	*Wield the paddles together.*

Chamorros have a saying (Sander, 1992, p. 215):

Yanggin taya affa 'maolek-mu, ni unfanapasi ti un madalalak.	*If you don't care for the group (family, village, clan), even if you pay, no one will help you.*

In Samoan culture there is a comparable value of working for the good of the group rather than for individual gain. As Kinloch (1985) wrote, Samoan society may appear hierarchical in its *mafai* (chiefly) system, but "in fact, cultural processes seek to maintain a balance . . . where everything has a place in a pattern (similar to a jigsaw puzzle); the picture is never complete unless every piece is in its proper place." Kinloch refers to this as the "complementary tendency" among Samoans.

This complementary relationship is so vital to the Samoan people that the actions of an individual are considered to have direct effect on the spiritual wholeness of the group. The health of a Samoan individual is intertwined with the condition of the *fagafa* (people). A person's troubles or sickness essentially disrupts the flow of life (*soifua*) and the social order. Violent drunken behavior, for example, brings "illness" and disharmony to social relations. In the words of Kinloch (1985), "Certainly a person who is

drunk can be regarded as sick on two counts: firstly, he . . . has drunk a poisonous substance; and secondly, he has broken the continuity of people's living (p. 22)."

The severe and tragic consequences of one man's misbehavior are seen in the account of the son who had not served (*faufua*) his father well because he roamed aimlessly rather than working and sending money home. When his father died, the family and community felt that this happened because the son had not shown proper *fa'aaloalo* (respect) or *alofa* (love) for him. The son, on realizing this failure, committed suicide. There were accordingly three losses: the life of the father, the life of the son, and the life of the group. The family eventually reaffirmed itself and "reorganized" through its grieving for all of these losses (Kinloch, 1985).

Interdependence

Substance abuse takes a great toll because it breaks down and threatens the essence of Pacific Islander society, that is, the shared responsibility to care for the well-being of others. Substance abuse can be prevented by calling upon group members to help those who stumble and fall.

Kanahele (1986) compared this reciprocity, which lies at the heart of all Polynesian value systems, to a gigantic spider web "whose threads represent the mutual obligations that each member of the society bears toward the others." Kanahele continues:

> *As long as each person fulfills his or her responsibilities, the web holds together in beautiful symmetry; when individuals fail to live up to those responsibilities, the threads are broken, the web weakens and eventually falls apart. . . . The moral explaining how a human society should function was declared in the way Hawaiians declared their symbiotic relationship with the gods: it was mutual giving and taking, with benefits accruing to both, allowing both to achieve their respective functions and aspirations. (p. 80)*

Another of the most salient metaphors of group adherence and coherence is *hihia* (net). It is the untangled and well-mended net, a network of extended and beneficial relationships that form behavioral expectations and security for an individual (Whitney,

1987). Substance abuse and its concomitant aberrations of thought and action can be seen as rending this net or producing "knots" that interfere with social order. Substance abuse can be symptomatic of an absence of sustaining and nurturing relationships. Even rebellious behavior among Pacific Islanders may be a result of a lack of a sense of belonging, rather than individual defiance. Pacific Islanders strive for interdependence. The more interdependence that exists, the greater a person's esteem and worth.

Interdependence in Chamorro culture is called *inafa' maolek,* literally meaning "making it good for each other." It is a core value of the Chamorros to work and live cooperatively and with reciprocity. As Cunningham (1992) has written:

> *For the ancient Chamorros there was no such thing as an individual free to act as he or she pleases. . . . You are obligated to others and they are obligated to you in a network of mutual responsibility. . . . Chamorros choose a network of group relations and tend to say "I owe to . . ." (p. 86)*

Souder (1992) has stated that different interpretations and definitions of the family have challenged the heart of the traditional Chamorro social system. Clans have virtually disappeared. Yet the family—both the household unit (typically composed of a married couple, their children, and other relatives) and the extended family (maternal and paternal parents, siblings, grandparents, aunts, uncles, cousins, nieces, nephews, regardless of residence)—continues to be the foundation of Chamorro social organization. A system of reciprocal exchange and obligation exists as strongly today within the family as it existed in ancient times within the clan. Rites of passage, many linked with a centuries-old Catholic tradition, provide the occasions during which mutual obligations among kin are reciprocated. The extended family is also a valuable source of support during the life crises of its members (Souder, 1992, p. 46).

Duty, security, tradition, and harmony were stressed within the group. To maintain group harmony, Chamorros avoided confrontations. Matters were discussed until an agreement was reached by consensus.

Conflict Resolution

The traditional Hawaiian technique of *ho'oponopono* (to correct or make right) provides a method for avoiding or solving communal, family, and personal problems (Draguns, 1989). The technique developed out of necessity because misbehavior or conflict in an isolated region could easily threaten the entire group. Since the early 1970s, ho'oponopono has experienced a revival and is employed in a variety of settings, including substance abuse prevention programs. As described by Johnston (1993),

> *Ho'oponopono* can be used in a diagnostic, remedial, and preventive way—if you don't know the problem, it can help discover it. If you do know the problem, it can help solve it. If no problem exists, regular open discussion can stop any problem from growing into something unwieldy. *(p. 8)*

Ho'oponopono is led by a senior and respected person. It begins with a *pule,* a prayer to the *aumakuas* (ancestral gods) or *ke Akua* (God) to establish the necessary conditions of sincerity and truthfulness to be maintained throughout the interaction (Shook, 1985). The nature of the *hala* (problem) to be discussed is identified and group strengths are pooled to find a common solution. Persons involved in this problem are bound together in a negative entanglement. An initial hurt or wrong is often followed by other reactions or misunderstandings until a complex knot of difficulties has evolved. It is the leader's responsibility to choose one of the problems and resolve it through *mahiki* (discussion). Successive layers of trouble are uncovered and resolved until relationships are "free and clear."

During this process, the leader steers the group away from direct confrontations and emotional outbursts that could exacerbate problems and discourage solutions. Each person directly or indirectly affected by the problem is asked to express his or her *mana'o* (feelings). This is done with honesty but in a manner that mitigates blame and recrimination. If tempers flare, the leader can declare *ho'omalu,* a cooling-off period of silence. During ho'omalu, members can reflect on the purpose of the gathering and allow their emotions to subside.

After all discussion, a confession of wrongdoing and a statement of forgiveness are expected. An agreement is made regarding any necessary restitution. Those in conflict are expected to *kala* (release) the problem, which is now considered *oki* (cut off). The family or group's strengths are reaffirmed and enduring bonds are expected to follow. The closing or *pani* includes a closing pule (prayer) and a potluck meal (Ogawa, 1990). The pani occurs after reaffirmation of the group and marks the transition from formal problem solving to normal daily living.

For Samoans, the *fono* provides a comparable setting in which hostility or disagreement can be voiced and resolved. Each speaker must be heard without interruption, no matter what is said. During this time disapproval can be expressed by a bowed head, a downward gaze, and silence. Each person is expected to accept the mediation and advice of the elders present. Opponents are called upon not to depart until their anger has been exhausted and reconciliation has occurred (Metge & Kinloch, 1984).

Chamorros also rely on age-old practices for conflict resolution. Elders of the family guide members to resolve differences and to recognize and own up to offending behavior that causes shame or pain to the family. Because the family's reputation is paramount, there is an elaborate support system from which members can draw assistance during times of crisis. Those individuals who are integrated in this elaborate and multilayered reciprocal exchange system are most likely to derive benefits and to be influenced in terms of behavioral controls; creation of shame for the family might mean losing the support and security that these strong reciprocal bonds provide (Souder, 1992).

Sense of Belonging

In modern American society, individuals prosper by developing and displaying individual achievement. Substance abuse prevention among Pacific Islanders, however, must operate from the perspective of facilitating and reinforcing positive group experiences to develop a secure sense of belonging. For Pacific Islanders, strong affiliations provide safeguards and guide behaviors. Right behavior does not develop in a vacuum but is tied to the maintenance and improvement of friendship, familial bonds, and community.

When a person lives on the basis of Pacific Islander values of *lokomaika'i* (generosity, "good heart") and *ho'okipa* (hospitality), there is little room for selfish behavior. Indeed, withholding or taking something from another person is considered *hewa*, a grievous wrong (Kanahele, 1986). One legend of Maui, for example, tells of a red-headed mud hen who possessed the secret of fire but cooked only for herself. As the saying goes, *Ho'oke a maka*, (Deny the eyes). A selfish person thinks only of him- or herself without regard for others, never sharing even with those who look on with longing eyes (Pukui, 1983).

When Pacific Islanders realize the shamefulness of their selfish acts, including substance abuse and its detrimental effect on significant others and the community, *pono* (right behavior) becomes paramount. Hitting rock bottom, which in Pacific Islander culture means being removed and isolated from others, may be the first step toward healing.

A case illustration follows. A Native Hawaiian war veteran suffering from posttrauma effects medicated himself with large amounts of alcohol and marijuana in an effort to forget. He believed that use of these substances allowed him to cope with his problems and maintain his responsibilities. Over a long period of time, ties to his *'ohana* (family) disintegrated. His expressions of caring for his spouse and children became hollow. The family delivered an ultimatum: Live apart or change. *Mo ka piko* (cut the umbilical cord) means to release the troublemaker from the fold (Johnston, 1993). Faced with the possibility of losing his family, the man completely stopped using alcohol and marijuana. What sustains him today is his commitment to the welfare of his loved ones.

This healing process is expressed by Analika Nahulu, who is the director of Hale Ola Ho'opakolea, a healing center in Nanakuli, Hawai'i. According to Nahulu, wellness is not an individual state, it is doing things together. Success is measured not by keeping persons away from drugs, but by preserving and restoring families (Office of Hawaiian Affairs, 1993a, 1993b). For 'ohana combines 'oha, the offshoots of the taro plant, which furnished the staple of life for Hawaiians, with the suffix *na* to become "many shoots from the same stock," that is, family. To keep Native Hawaiian individuals strong, we must nourish and cultivate their families (Craighill Handy & Pukui, 1958).

It follows that substance abuse prevention for Pacific Islanders must be rooted in methods and programs that foster mutual responsibility, facilitate the resolution of differences, and emphasize skills that promote social harmony. Among Pacific Islanders, the sociopsychological, philosophical, spiritual, and practical methods, as well as behavioral precedence, exist. Service providers need only develop and strengthen the links to right behavior through culturally competent methods such as being highly personal, flexible, and informal. As Kanahele (1986) emphasized:

> *Instead of talking at you, he talked with you, because he had to make sure that you got the message correctly by giving you the opportunity to reply to him. After all, as leader of the 'ohana, his prime duty was to ensure that each member understood his or her role in the general scheme of things. So fundamental was this principle in Hawaiian life that we can take it as the rule that governed in almost any situation . . . the haku quite naturally appealed to that value—the sense of collective pride and glory—in motivating his members to produce and work at their very best. (p. 348)*

Issues of Racial Discrimination: 'Work For Justice'

The second meaning of e hana pono is to work for justice. Although the term "justice" refers to criminal procedures and legal rights, substance abuse and crime are often associated, and they frequently co-occur among Pacific Islanders. Statistics from the Federal Bureau of Prisons for 1992 reveal that a large percentage of inmates had a history of substance abuse. Of those incarcerated, 64 percent admitted alcohol abuse; 26 percent, use of cannabis; 24 percent, use of cocaine; and 13 percent, use of other narcotics (U.S. Department of Justice, 1992). Figures for Pacific Islanders were not available in the report on Federal prisoners, but a review of arrests for criminal offenses in Hawaii during 1992 highlights the significant criminal activity among this group. Native Hawaiians and part-Native Hawaiians constituted 12.5 percent of the State's population in 1992 but accounted for 21

percent of the arrests for serious violent crimes. Samoans constituted 1.4 percent of the population but committed violent crimes in more than 2.6 times their proportionate numbers. Arrest rates for offenses involving illegal drugs were even more pronounced: Native Hawaiians and part-Native Hawaiians were arrested at almost twice their proportional rate and Samoans at almost six times their proportional rate for possession of opium or cocaine. These disproportionate statistics are also true for Chamorros on Guam. Chamorros are in crisis because the spirit of Chamorro well-being has been abused by 400 years of debilitating colonialism. This abuse has led to dependency and crime. Souder (1992) describes the status of Chamorros this way:

> *Once the dominant cultural group on Guam, Chamorros are fast becoming a minority in their homeland. The United States continues to control immigration to Guam. Without local control, Chamorros are likely to leave the island in search of better living conditions or remain as an underclass. . . . The political aspirations of newcomers and statesiders who relocate to Guam are distinctly different from the aspirations of Chamorros. Outnumbered, Chamorros can be prevented from ever exercising their inalienable right of self-determination. This threat grows as the number of Chamorros diminishes in proportion to the rest of the population. Although most island politicians like to describe the population as a heterogeneous melting pot, the reality of ethnic conflict cannot be ignored. Tension between Chamorros and Filipinos or statesiders is a product of competition for employment, services, and other benefits available in the name of progress. Limited opportunities have worked to the disadvantage of Chamorros, who do not often possess the training or skills in demand. . . . Crime, the cost of living, and competition for limited resources have increased tremendously. The number of recipients of food stamps and other government handouts is steadily growing. Guam has shifted from being a self-sufficient community to a consumer society which imports most of its food requirements and nearly all other commodities. This, coupled with the sale of land to outside investors, has created a totally lopsided economy which is extremely controlled. Programs in agriculture, fisheries, and local industrial enterprises*

have reduced Guam's dependence on outside resources somewhat. But, until development is internally initiated and the sale of land is stopped, the dream of regaining some vestige of economic control will be out of reach for Chamorros. (pp. 35–37)

Springer (1993) offered that "although studies of drug use patterns indicate that people from all classes, races, and backgrounds use drugs in our society, those who use them in the most harmful ways are people who suffer the deprivations of racism, sexism, homophobia, and classicism" (p. 2). If, she added, drug use is the major coping mechanism of the stigmatized and deprived, drug problems will prevail until social problems are addressed.

Ghost of Inferiority

Native Hawaiians, in Kanahele's evaluation, have been cast as inferior since their first contact with Europeans and Americans:

Our search for values is also a search for renewed pride in our traditions, but this is unlikely to be realized unless the ghost of inferiority is fully exorcised. . . . Perhaps the beginnings lay not so much in the fact that Hawai'i's natives were inferior, but that the whites brought things that made them seem superior. In either event, the germ of the idea—more deadly to the soul of Hawaiians than any disease germ—was racism. (Kanahele, 1986, p. 22)

The beliefs, morals, and social values of the Chamorros of Micronesia were likewise condemned. As the Spanish Catholic missionary Father Sanvitores summarily stated in the 1660s, the Chamorros displayed "arrogant stupidity, backwardness, and wicked immorality." Father LeGobien added: "Never existed a people with more ridiculous presumptions and more stupid vanity. Submerged in the most profound ignorance that ever was, and deprived of all commodities of life. . . . ("Chamorros," n.d.). Successive occupation of the islands of Micronesia by Germans, Japanese, and Americans have contributed to the fracturing of a positive identification with the indigenous cultures of these islands. Clashes in cultural values and uncertainty about one's identity have led to a sense of disconnectedness, which in turn is

directly linked with rising crime, substance abuse, and family violence (Souder, 1992). According to the *Guam Comprehensive Development Plan of 1978*,

> *The colonial history of the island has benefited Guam's development in many ways. It has introduced many new political ideas, scientific advances, and economic progress. However, the island's people have had little input into the development of Guam's political and social institutions. Outside forces in control of the island have viewed Guam's culture as a stumbling block to what they have defined as progress. This has resulted in an unnatural and unbalanced development of the island's culture. A serious consequence has been the development of a negative self-image regarding island values. The comparison of local lifestyles to "stateside" lifestyles in order to measure progress and success often results in negative self-images of Guam and its culture. (cited in Souder, 1992, p. 39)*

This "ghost of inferiority" haunts any substance abuse prevention effort. Measures to provide education about the risks of substance abuse or to build self-esteem (defined narrowly as a sense of individual self-regard) are not sufficient among Pacific Islanders or, perhaps, most populations (U.S. Department of Justice, 1992). Acting with right behavior toward others is inhibited if predominating societal sentiments regard that group as less worthy of receiving loyalty. Patterns of behavior developed solely from self-deprecating attitudes are also likely to reinforce the sources of that self-deprecation. Building connections to others must therefore interlock with raising or reinstilling racial and ethnic status.

Although there are those of minority status who manage to compensate (or overcompensate) for their assigned or perceived inferiority, there are also those who acquiesce through criminal acts and substance abuse. Thus, stereotypes are perpetuated and racism becomes more entrenched. As Alama and Whitney (1990) stated:

> *Perhaps most insidious of all was the role alcohol played in the oppression of Hawai'ians through the subtleties of the kanaka*

stereotype. Hawai'ian men, especially, were held to their economic and political marginality by the "local boy" mythology. And when they drank they both confirmed and rebelled against the myth.

Mentor Systems

An ancient Hawaiian strategy for constructing a strong social net of belonging was called *imihaku* (to seek a patron). The inexperienced youth sought a mentor who was knowledgeable. This mentor relationship helped provide protection from misfortune and error, as well as providing instruction in practical ways. To blend into the larger group and to contribute to its ongoing life required both pride in the group and pride in one's stewardship of what was being imparted from the group. Inextricably tied to imihaku, however, was the *mana* (productive or enabling life force) possessed by and derived from the mentor. This mana was not inherent in the mentor but was sustained by the manner and spirit of its use. In Pukui's words: "For non-use or neglect, as surely as wrong use of *mana*, would result in lost *mana*" (as cited in Kanahele, 1986, p. 294).

After Western culture entered Hawai'i in 1778, and at various times elsewhere in the Pacific, there was an erosion of the traditional leadership role and mana, of the ali'i and kahunas, as well as an erosion of the eminence of skilled technicians, artisans, and craftspersons. The introduction of foreign commodities, foodstuffs, technology, etiquette, and religion undermined the respect of the *maka'ainana* (populace) for their leaders. Kanahele (1986) wrote:

> *. . . the new things lacked the all-important association with the mythology, the "sense of place," and the history that were part of the complex of Hawaiian culture. . . . In short, the new technologies minimized the ritual functions of the leaders and consequently robbed them of a vital source of mana without replacing it with new channels for restoring weakening spiritual power." (p. 423)*

Gradually, the knowledge and expertise of former mentors seemed obsolete and the mentor relationship was increasingly

discredited as burdensome. The foundation of Hawaiian society, pride in traditional virtues and values, fell to the wayside. Sacred customs became scorned and ridiculed as superstition and paganism (Kanahele, 1986). When long-developed lifeways are cast aside for those of alien origin, societies suffer social disorganization and people suffer the dilemma of whether to resist or embrace new mentors. Pacific Islanders have been plagued by the absence of normal evolution of their society. A partially welcomed but mostly uninvited array of missionaries, entrepreneurs, investors, and other strangers have come to their homeland. Pacific Islanders have little choice as to who their emerging leaders would be. A new mana was introduced, derived not from the character of the old mana, but from the allure of Western ways perceived by the Pacific Islanders. This description of the inhabitants of Guam, for example, was written in 1817:

> *[They] have been transformed into Spaniards. They live and dress like the Tagalese about Manila, cultivate rice for present use, prepare and drink the cocoa wine, chew the betel and smoke tobacco. . . . ("Chamorros", n.d., p. 24)*

The Chamorros, at the beginning of the 19th century, were acculturating, and lost many of their traditional ways. The new culture had been thrust upon them with "strong pressure and with a great zeal for immediate change" ("Chamorros," p. 19). Conflicts of culture create enormous problems in the lives of Pacific Islanders who live on the lower scales of socioeconomic indicators and who are imprisoned within institutions or their own addictions. Substance abuse prevention programs must develop mentors who reach into every segment of Pacific Islander society and acknowledge the impact of the dismantling of indigenous cultures. This does not mean that every outside influence on Pacific Islanders has been negative. It means that these influences must be evaluated from the perspective of their recipients and not from the view of those who promulgated them.

One noted mentor for Pacific Islanders is Hawaiian cultural expert and musician Haunani Apoliona. A young Native Hawaiian described his admiration for her as a woman of diverse talents. He recalled that Apoliona once described her life as analogous

to *kapa* (bark cloth). It requires great effort to pound the kapa and join the many layers to fashion a garment. Even upon close inspection, one cannot easily see the seams where the kapa has been joined. As the margin of one layer interweaves with the margin of another to form a larger piece, Apoliona weaves together the variations of her life. Whether as the president and chief executive officer of Alu Like, the respected Hawaiian rights organization, or as an award-winning singer and gifted teacher, each endeavor is part of the fabric of the kapa, indistinguishable and inseparable from the whole (R. Dancil, personal communication, October 21, 1993).

Opportunities for Success

The denial or degradation of central aspects of their lives has produced rough and torn edges in the kapa for many Pacific Islanders. These edges become more pronounced as the legal, governmental, and educational systems have become less relevant for Pacific Islanders and more advantageous for those who are not from traditional Pacific Islander cultures. Authority figures or teachers are insufficient or ineffectual mentors, or these "role models" represent unobtainable or unsatisfactory goals.

Two decades ago, graduate students from the Native Hawaiian social work program at the University of Hawai'i assisted youth living on Honolulu who were at risk for substance abuse. Most of the youth were of Filipino, Samoan, and Hawaiian ancestry. There was no formal office, only the neighborhood playground and minipark. A number of activities took place almost daily, including tutoring, sports, and excursions. Among the most disturbing discoveries in working with these young people were their thoughts about where their lives were going. "My brother stay Oahu Prison," one Samoan 13-year-old boasted. "I like be like him." This was a way of gaining recognition among the other boys. No teacher in this boy's intermediate school, no politician, no scientist, no occupation was of particular interest or relevance to him.

Studies have indicated that those who believe that they have meaningful choices and have something to lose by making foolish decisions are less likely to abuse substances and are better

candidates for recovery if they do begin to abuse them ("Update on Cocaine," 1993). On the other hand, those who see few future prospects and believe that society has made little investment in their future are less likely to feel obliged to comply with society's standards.

The 13-year-old boy who admired his incarcerated sibling is an example of the tragedy experienced by many Pacific Islander youths. This boy was both leader and misfit in his neighborhood. Because of his relatively large size, strength, sharp tongue, and street-savvy ways, he protected the other members of his group from young intruders from other neighborhoods. Yet he intermittently bullied these same group members. Physical fights and posturing for control were frequent. Only after 2 years of consistent personal interaction with a local businessman, who volunteered with the graduate students, was this boy able to identify a more positive life course than that chosen by his incarcerated brother. The businessman allowed the boy to accompany him in his work, offered job skills training, and spent time helping with the boy's *fa'ali'i* (aggression and anger) and *fa'anoanoa* (unhappiness). In other words, he was an appropriate mentor who spent considerable time with the boy and provided opportunities for him. In fact, this mentor was helping someone who might someday become a gifted mentor to someone else.

Again, e hana pono signifies to "work for justice." A basic tenet of justice is equal opportunity for success. Any society that perpetuates inferiority among some of its members advances injustice. Unless substance abuse prevention programs can enhance the number of mentors who are credible and accepted by Pacific Islanders, Pacific Islanders will suffer not only from substance abuse but also from legal consequences tied to those abuses, such as inflated rates of criminal convictions and imprisonment. These criminal consequences will only compound the already serious health, social, and economic problems that exist among Pacific Islanders. Mentors themselves must address these multiple concerns in specific ways. Putting Pacific Islanders back on track toward right behavior requires realistic goals and pragmatic rewards.

Issues of Preservation of Culture: 'Strive for Righteousness'

E hana pono finally means to strive for righteousness (i.e., to be integrated with the greatest possibilities for one's life where it is lived). Increased contact with the Western world, the zeal of arriving Christian missionaries, and the struggle for power in the Pacific created an unsettling situation by exposing Pacific Islanders to rapid changes, which continue unimpeded. As the Hawaiian proverb warns (Pukui, 1983, p. 210),

> Lanalana, pa i ke Kona, huli pu.
>
> *Insecurely rooted, when the Kona wind blows, it topples over.*

What is the root or basis of the knowledge and character of present-day Pacific Islanders? Have the torrents of change not allowed the firm planting and logical progression of their social values, beliefs, and organization? In one sense Kanahele's (1986) words ring true: Native Hawaiians have "no solid foundation" and live with an "emptiness" as to their culture. In another sense, there is a Native Hawaiian "renaissance" occurring, a resurgence of pride, an ownership of destiny, and a prophetic voice regarding the rights and essence of what is Native Hawaiian. Parallel with the changes in Hawai'i, there is also crisis and renaissance among the Chamorros. In the words of Souder (1992):

> *Guam is at the threshold of a new era in its political development. The people of Guam are finally coming to terms with our historical experiences as a colonial territory, first as a Spanish colony then as an American colony. As such, they are demanding a change in their political relationship with the United States. A large segment of the island's population are on food stamps and a large percentage are welfare recipients. This dependency on sources outside of the family's ability to sustain itself economically has had a dramatic effect on how Chamorros perceive themselves, how they are perceived by American administrators (as wards of the Federal Government), and the kind of self-image that is communicated to upcoming generations. A cultural identity crisis, loss of pride, and a dependent*

community are not the only problems the people of Guam face today. Crime, divorce, prices, housing costs, water and power rates are escalating at an alarming speed. . . . To avoid the continued control and domination by outside forces which the people of Guam have experienced for nearly five hundred years under colonialism, Chamorros need to adopt a future course which will allow for economic self-sufficiency, humanitarian goals, and a climate in which the Chamorro language and culture can flourish. Chamorros have made it abundantly clear that this is the direction they want to go!" (p. 241)

No worthwhile prevention program can ignore the depths of this emptiness and the hopes associated with this cultural renaissance.

Sovereignty and Homelands

The essential quality of Pacific Islanders is that, like first inhabitants and native peoples throughout the world, they are dominated by close, almost sacred ties to their homeland. "You know who you are when you know where you are" captures the meaning of life for Pacific Islanders. Kanahele (1986) describes the importance of place in traditional Native Hawaiian culture:

No genealogical chant was possible without the mention of personal geography; no myth could be conceived without reference to a place of some kind; no family could have any standing in the community unless it had a place; no place of any significance, even the smallest, went without a name, and no history could have been made or preserved without reference, directly or indirectly, to a place. (pp. 175–176)

Because they occupied the same lands (*kuleana* or *ahupua'a*) for generation after generation, according to Kanahele, the "attitudes, instincts, perceptions, feelings, and values" of Native Hawaiians were "shaped and molded" by those places. Conversely, being without a place meant being severed "from the most vital physical, psychological, social, and spiritual values of one's existence" (Kanahele, 1986, pp. 181–182).

Many Native Hawaiians today have no place. The Office of Hawaiian Affairs reports that 14,000 qualifying Native Hawai-

ians are still displaced from their own homelands, and some have been on waiting lists for more than 30 years ("Kahoolawe funds criticized," 1993). This situation arose when *haoles* (foreigners) immigrated in the early 1800s and demanded land from the ruling chiefs for their business enterprises and estates. Between 1848 and 1850 the Great Mahele ("Great Division") granted Western-style simple ownership and hastened the unraveling of traditional Hawaiian society. Eventually, Native Hawaiians, particularly those in the general population, became dispossessed of their ancestral lands (*'aina*). The 'aina, and the wealth associated with it, became the property of White foreigners. In 1893, these foreigners overthrew Queen Lili'uokalani and seized government lands and crown lands of the Hawaiian royalty. The seizure took 43 percent of the land in the Hawaiian Islands (Cooper & Daws, 1990).

In 1900, Hawai'i became a territory of the United States, and in 1959 statehood was granted. During this time, land continued to be the "political battleground and prize." In the 1950s, grassroots Democrats wrested control away from Republicans who were associated with powerful corporations. Burgeoning tourism, increasing numbers of recent arrivals from the continental United States, and military buildup have become major factors in land control and use (Cooper & Daws, 1990, p. 458). Within this long struggle, Native Hawaiians have attempted to renew their self-identity and self-esteem through their connection to the 'aina (land).

The movement for Native Hawaiian sovereignty has focused on a quest for land-based self-governance. The particulars have been debated but almost all sovereignty supporters agree that the 'aina is the key to future status, cultural preservation, and reversal of the deplorable socioeconomic plight of many Native Hawaiians. It was always the 'aina that nurtured and sustained the *kanaka maoli* (indigenous Hawaiians). *'Ai* derives from the verb "to feed" and the suffix *na* renders it to "that which feeds." The 'aina is the "feeder" of its people (Craighill Handy & Pukui, 1991, p. 3). The Hawaiian word for wealth, similarly, is *waiwai,* from *wai,* meaning "water." Without water the ancient Hawaiians could not grow their taro. Plentiful water was a blessing from the gods

because it provided the means of living and support for the 'ohana. No one person or group of people possessed the water; the wealth was to be shared by all. Water was a metaphor for righteousness, in that it was the opportunity and means to be "correct" in relation to all of one's surroundings, whether supernatural, natural, or human.

Sugar and pineapple production dominated by *haole* conglomerates systematically changed the landscape of the islands, and the growing of taro has dwindled to near extinction. By the 1980s the largest cash-yielding crop was marijuana (*pakololo*) (Cooper & Daws, 1990). The 'aina has been depleted and exploited, which is contrary to the Hawaiian tradition that as much be given back as is taken from the land. For example, in the growing of taro, the natural cycle was to replenish and rework all parts of the plant not used or consumed into the soil. The 'aina, ancient Hawaiians believed, could not feed unless it in turn was fed. Can today's Native Hawaiians succeed at the enormous task of reestablishing intrinsic regard for the 'aina without compromising the Western notions of property ownership? How much connection to place has been lost? How realistic a goal is the return of sufficient homelands to ensure viability? Will the reclaiming of the 'aina awaken cultural strengths, or will these strengths be further hidden under burial mounds of political and economic forces?

The Chamorros also face daunting challenges with regard to their homelands. In 1698, for example, all Chamorros on the island of Saipan were displaced to Guam. They were uprooted from their native soil and crowded into villages. It was not until 1818 that the Chamorros were allowed to return to Saipan. The period of relative peace and stability ended after the Spanish-American War, when the United States gained possession of the islands of the Marianas and the Carolines and then sold them to Germany.

In 1914, the Marianas were seized by the Japanese. The Chamorros of Saipan experienced an economic, social, and political transformation of their island. Japan's initial interest in Saipan was military and strategic, but changed to colonial expansion and became permanent settlement. In 1944, the United States invaded Saipan with fierce aerial and naval bombardment. This account relates the suffering endured by the Chamorros:

The hills were full of dead and wounded, and the natives had seen their children, parents, and friends killed before their eyes. They had lost all their possessions and found themselves once again in the hands of an unknown power. ("Chamorros," p. 50)

Today, Saipan is part of the Commonwealth of the Northern Mariana Islands, and the Chamorros are United States citizens. The official languages of the Commonwealth are English, Chamorro, and Carolinian. The scars and vestiges of foreign domination remain: hundreds of thousands of Japanese tourists visit annually, United States warships patrol the coastlines, Chinese own the garment factories, and there is great disparity between rich and poor.

This situation has been repeated for Chamorros on Guam. Alienation from the land has become a critical issue in the debate on Chamorro self-determination. As *taotao tano,* or people of the land, Chamorros and their ability to survive as a nation of people are inextricably linked to their land (Souder, 1992). To date, Chamorros have not had the freedom to develop a modern cultural matrix that can be called their own.

Practice of Culture

The Pacific Islands have special ecosystems that have produced remarkable cultures. Pacific Islanders can ill afford to completely lose their traditional cultures, and the world would likewise be impoverished by such extinction. As Octavio Paz has said "life is plurality" with worlds set in motion by the "interplay of differences":

The ideal of a single civilization for everyone, implicit in the cult of progress, impoverishes and mutilates us. Every view of the world that becomes extinct, every culture that disappears, diminishes a possibility of life. (as cited in Whitney, 1987, p. 10)

Bopp (1988) revisits this point about cultures:

. . . [N]ot only do distinct cultures have unique perceptions not experienced by other cultures, but they also have unique gifts and abilities. They can know things, see things, experience things, and do things that people from other cultures cannot. (p. 8)

The unique characteristics of Pacific Island cultures have been systematically repressed and relegated to the past. Estrangement and the denigration of cultural strengths and resources are at the foundation of what ails many Pacific Islanders. Throughout history, newcomers to island shores have removed essential pieces of culture and replaced them with new thoughts, behaviors, and values. Alcohol and illicit drugs have been facilitators of this process and are anesthetics for the pain that results from cultural genocide.

Analika Nahulu recognizes this and composes activities for her substance abuse clients that "help reactivate cultural memories lost after decades of neglect" (Office of Hawaiian Affairs, 1993b, p. 6). Gathering *limu* (seaweed) or weaving *lauhala* (pandanus fiber), for example, allows the experiencing of cultural ways and imparts valuable lessons. If a person works the lauhala and picks limu, there will be benefit. If a person chooses not to, that person and others will suffer.

By analogy, abusing substances has considerable negative consequences to individual health and to the collective well-being. Engaging in traditional cultural practices, knowing their importance, and understanding their purpose imparts acceptance of the self as a preserver of the culture's mana and as a contributor to the greater good. It is from this basis that one strives for righteousness, that is, a rightness and *lokahi* (harmonious relationship) with nature, the spirits, and others. As Nalani Olds Reinhardt teaches in prevention and treatment programs for Pacific Islanders, "You cannot know where you are going unless you know who you are and from where you have come" (N. Olds Reinhardt, personal communication, October 23, 1993). One's personal future comes from one's past cultural history and identity. Substance abuse prevention programs for Pacific Islanders cannot ignore this essential truth.

Redirecting Institutions

To succeed in preserving culture and safeguarding individuals, substance abuse prevention programs must remind, cajole, invite, and direct those institutions that have traditionally served

as trustees and benefactors of Pacific Island cultures and peoples. Kamakahi (n.d.) reviews the historical mission and present course of two prominent "crown-based healthcare legacies" in Hawai'i. He notes that these institutions, The Queen Lili'uokalani Children's Trust and the Lunalilo Home, have been true to the purpose of meeting the health concerns of Native Hawaiians through continual "assessment, evaluation, and mobilization." Two others, The Queen's Medical Center and the Kapi'olani Women's and Children's Medical Center, have taken "a trajectory that veers away from the specific health concerns of Native Hawaiians" (Kamakahi, n.d., p. 29).

The most significant trustee designated to shape the future of Native Hawaiians, however, is the Bishop Estate, the legacy of Princess Bernice Pauhi Bishop. The Bishop Estate is the principal repository of lands for the education of children and youth who are Native Hawaiians. Over the last century, the relationship between the trustees and the beneficiaries of the Bishop Estate has been "complex and ambiguous" (Cooper & Daws, 1990, p. 458). Only in the mid-1980s were trustees appointed who were of Native Hawaiian ancestry. According to some critics, to protect and increase assets, the trustees have managed lands and funds with particular financial goals in mind rather than directing resources toward reversing the deplorable conditions of many Native Hawaiians.

Equally complex and ambiguous has been the role of churches among the Native Hawaiians and other Pacific Islanders. Kanahele (1986) wrote that, collectively, the Hawaiian churches (i.e., Protestant Christian) are "modern strongholds" for the preservation of Native Hawaiian language and traditions. Yet these very churches "seldom speak out, or at least do not speak out loud enough to attract media attention on nonreligious matters affecting Native Hawaiians" (p. 435).

It is reported that early Christian missionaries did speak out against the consumption of alcohol. Confrontations raged between evangelists and their converts and grog shop owners and their patrons. Native Hawaiians, in the words of Alama and Whitney (1990), were both "spectators and participants in this polemic."

By the 1850s and 1860s, however, missionaries had lost much of their influence as economic and political interests began to prevail. The spiritual and health concerns of Native Hawaiians were less important than the desire of the *malihini* (newcomers) to stem public disorder and the "pent-up hostilities" of Native Hawaiians. Alcohol depressed these hostilities. After the overthrow of the Hawaiian monarchy, a law prohibiting the sale of alcohol to Native Hawaiians was eliminated. This was "small comfort to Native Hawaiians who, in effect, had to give up self-government for the privilege to drink" (Alama & Whitney, 1990).

Is it possible for churches to help lessen alcohol and drug abuse among Native Hawaiians by concentrating their considerable resources toward sovereignty and cultural preservation? Can the concept of righteousness be broadened beyond individual salvation to encompass the rebirth of an entire people? For Pacific Islanders, striving for righteousness has historically meant resisting being converted—through abrupt force, unremitting coercion, gradual persuasion, and patient education—from their religious, spiritual, and cultural traditions. What has been lost cannot easily be reinstated or reversed. Substance abuse will continue unabated unless prevention programs can counteract the demoralization and oppression of Pacific Islanders who are living in a sociocultural environment that systematically strips away essentials of the self and culture.

Conclusion

Alcohol and drug abuse has been the fuel and pathogen implicated in the disintegration of culture and health among Pacific Islanders. Prevention programs can neither deny individual responsibility for addiction nor disregard the major social, economic, and historical forces that have stormed through the Pacific Islands to the detriment of native peoples' lifeways and well-being. The avenues to effective substance abuse prevention among Pacific Islanders can be described as follows:

- First, focus on personal responsibility by enabling or restoring relationships and affiliations, including family life.

- Second, develop strong mentor systems by improving accessibility to education, employment, and health services.
- Third, promote the spiritual renaissance of Pacific Islanders by creating productive traditional cultural formulas for living and by reinstating self-governance on native lands.

Substance abuse prevention programs must engage in interactive relationships with political, religious, and financial institutions with a mandate to care for the welfare of Pacific Island peoples. As the Chamorro proverb states:

> Maolekna manggagao ya ti ma na'i
> ki ma na'i ya ti ma agradesi.
>
> *It is better to ask and not be given than to*
> *give and not have it appreciated.*
>
> *(Cunningham, 1992, p. 120)*

A plea for commitment and obligation must be made to those institutions that powerfully affect Pacific Islanders. This plea is both a gift and a protest of conscience that deserves a grateful and fair response.

Prevention programs must concomitantly design and plan activities that link a wide variety of Pacific Islander concerns. For Pacific Islanders, alcohol and drug abuse is not a simple matter of individual intoxication and personal choice, but a symptom of lives dramatically affected by Pacific Islanders' experiences and cultural history.

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Epilog:

Developing Cultural Competence Evaluation for Asian-American and Pacific Islander Communities

Barbara W.K. Yee, Ph.D., and Noreen Mokuau, D.S.W.

To transform the vision of healthy and drug-free Asian-American and Pacific Islander communities into reality by the 21st century, primary health care providers and substance abuse prevention personnel must understand and practice cultural competence. Culturally competent programs for primary health care and substance abuse prevention have a unique opportunity to examine both protective and risk factors across understudied but potentially high-risk segments of Asian-American and Pacific Islander communities. Secular trends indicate that acculturation and Westernization of Asians and Pacific Islanders create conditions that lead to poorer mental and physical health and put these individuals at high risk for substance abuse (Yee, 1995). The opportunity to implement primary, secondary, and tertiary prevention among Asian-Americans and Pacific Islanders should not be missed; the human and financial costs are great if primary and secondary prevention efforts are not undertaken.

Seizing these opportunities to carry out effective programming for substance abuse prevention and primary health care in Asian-American and Pacific Islander communities requires that cultural competence be incorporated into each step of planning,

program implementation, and evaluation. Orlandi (1992) suggested that cultural competence is multidimensional and reflects various aspects of knowledge, attitude, and skills. In line with this definition, a culturally competent provider is one who understands the issues, is committed to change, and is highly skilled (Orlandi, 1992, p. 298).

In this volume, three essential themes are woven into the tapestry of culturally competent evaluation of substance abuse prevention and primary health care for Asian-American and Pacific Islander communities. One theme pertains to the diversity and heterogeneous nature of Asian and Pacific Islander communities and has many implications for substance abuse prevention and primary health care. The second theme suggests using the resiliency and strengths of these diverse populations as a tool to overcome multiple problems associated with substance abuse and compromised health status. The last theme emphasizes the importance of creativity and culturally competent research methodologies in the evaluation of programs for substance abuse prevention and for primary health care.

The Asian and Pacific Islanders census category constitutes nearly 3 percent of the United States population. It includes Asians from more than 20 countries with 60 different ethnicities (Forman, Lu, Leung, & Ponce, 1990) and Pacific Islanders representing multiple cultural and ethnic groups with origins in Polynesia, Micronesia, and Melanesia. The diversity is also reflected in different groups' histories of indigenous status or immigration, a multitude of languages and dialects, and variations in social and cultural styles. Such diversity reportedly affects attitudes toward alcohol use and has implications for primary health care in general and for substance abuse prevention in particular. A consistent message across the chapters of this book is that cultural competence requires providers and evaluators to resist broad generalizations about assessing and treating substance abuse (and improvising the health status) in this population. Cultural competence demands, instead, an understanding of the unique sociocultural contexts of substance abuse for the various Asian-Americans and Pacific Islanders.

The second theme is the notion that to develop cultural competence for Asian-Americans and Pacific Islanders there must be a recognition and incorporation of strengths and weaknesses and holistic concepts that are specific to cultures and individuals. Individual, family, and cultural strengths can be used to address the individual's substance abuse issues or to formulate techniques for substance abuse prevention and evaluation and for responsive primary health care.

The fostering of resiliency among Asians and Pacific Islanders who confront substance abuse and its attendant problems is linked to culture. Resilience refers to the ability to adapt to adverse conditions in a manner that contributes to well-being. Cultural heritage shapes people's ideas about the nature of substance abuse and its resolutions and is integral to resilience. The chapters in this volume emphasize that cultural competence in health care and in substance abuse prevention reflects the promotion or restoration of cultural strengths as tools to bolster resilience. For example, prevention programs that focus on the family and community are integral for Native Hawaiians who believe in the centrality of the collective. Networking with agencies and persons in the community, including family members, would ideally lead to greater success. A common denominator in fostering resiliency among all Asian-American and Pacific Islander groups is the cultural emphasis on the holistic nature of life. Holism is the perspective that all parts of the world are interrelated, and the holistic view is that prevention of substance abuse problems and promotion of optimal health are contingent on understanding and incorporating the many facets of life.

A third theme is that programs for substance abuse prevention and for health services, strategies for research, and methods of evaluating programs must be creative and must be designed specifically for the population of interest. For instance, specific sampling strategies, such as settings chosen for substance abuse prevention interventions, may vary tremendously across Asian-American and Pacific Islander groups. The prevention program and its evaluation must be specific to the ethnic, gender, and cohort or age groups sampled. Blind aggregation of these diverse groups may generate misleading conclusions about effi-

cacy or prevention efforts among Asian-Americans and Pacific Islanders. The best estimates of substance use among Asian-Americans and Pacific Islanders have come from localized studies, yet the samples in such studies are inexact proxies for the entire population across dimensions such as geography, cohort, age, gender, acculturation, and ethnic or cultural group. The inexactness of these estimates can be seen in the prediction of substance abuse prevalence rates for younger, more acculturated Japanese Americans on the basis of rates of older Japanese immigrant cohorts. More recent Japanese male immigrants have higher prevalence rates of smoking, substance abuse, and alcohol abuse than would be expected from the rates for their counterparts who came to the United States prior to the 1970s.

Survey and questionnaire development requires extensive pilot testing to determine whether formats, content areas, and languages are compatible with the target populations. Specific focus group pilot testing with open-ended and fixed-response questions appear to be critical for the development of culturally competent evaluation tools. Qualitative and quantitative evaluation methodologies used collectively can best capture the complexities and subtle cultural nuances essential to the development of culturally competent substance abuse prevention and primary health care programs for Asian-American and Pacific Islander populations.

The inherent difficulty in the current literature on substance abuse prevention and health services is that the model minority myth perpetuates the notion that Asian-Americans and Pacific Islanders have a low incidence of substance abuse and other health-threatening conditions. This illusion is exacerbated by the lack of good epidemiological health and mental health data. All chapter authors recognized the need to generate such basic data on Asian and Pacific Islander populations to guide policy development and programming in the health care and substance abuse prevention fields.

Key Recommendations for Evaluation of Substance Abuse Prevention for Asian-Americans and Pacific Islanders

1. Diversity issues for Asian-Americans and Pacific Islanders should be incorporated into research agendas, policy, and practice. In national and longitudinal studies and in data collection and analysis in research projects funded by private, State, and Federal agencies, attention should be given to ethnic and multiethnic self-identification, age and gender considerations, and sampling and oversampling of Asian-Americans and Pacific Islanders.
2. National and regional studies should be solicited to generate baseline data on disease and substance abuse rates across diverse Asian and Pacific Islander ethnic groups and across age, gender, and geographic locations.
3. Private, State, and Federal agencies should be encouraged to use culturally competent research and evaluation methodologies for Asian-American and Pacific Islander ethnic groups. The inclusion of women and Asian and Pacific Islander ethnic groups in national studies is an excellent start but is not a sufficient condition to establish accurate substance abuse and health data.
4. Cultural strengths should be identified and used to address health services and substance abuse prevention programming and evaluation for Asian-Americans and Pacific Islanders. More culturally specific holistic approaches should be embraced in primary health care and in substance abuse prevention programming and evaluations.
5. Resources should be provided for training Asian-Americans and Pacific Islanders in primary health care, substance abuse prevention, and culturally competent evaluation.
6. Prevention professionals should form active partnerships with Asian-Americans and Pacific Islanders in all aspects of program development, implementation, and evaluation to ensure the responsiveness of services and interventions for their communities.

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